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The Rubber Trade  
PAGE XLIII.

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# INDIA RUBBER WORLD



GUTTA-PERCHA

Edited by HENRY C. PEARSON—Offices, No. 150 Nassau Street, NEW YORK.

Vol. XXVIII. No. 5.

AUGUST 1, 1903.

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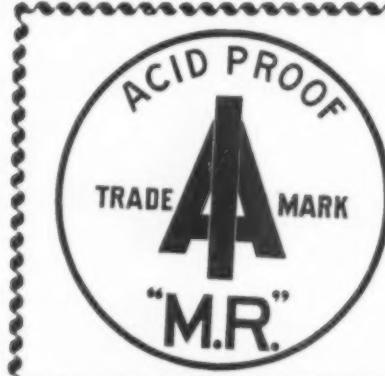
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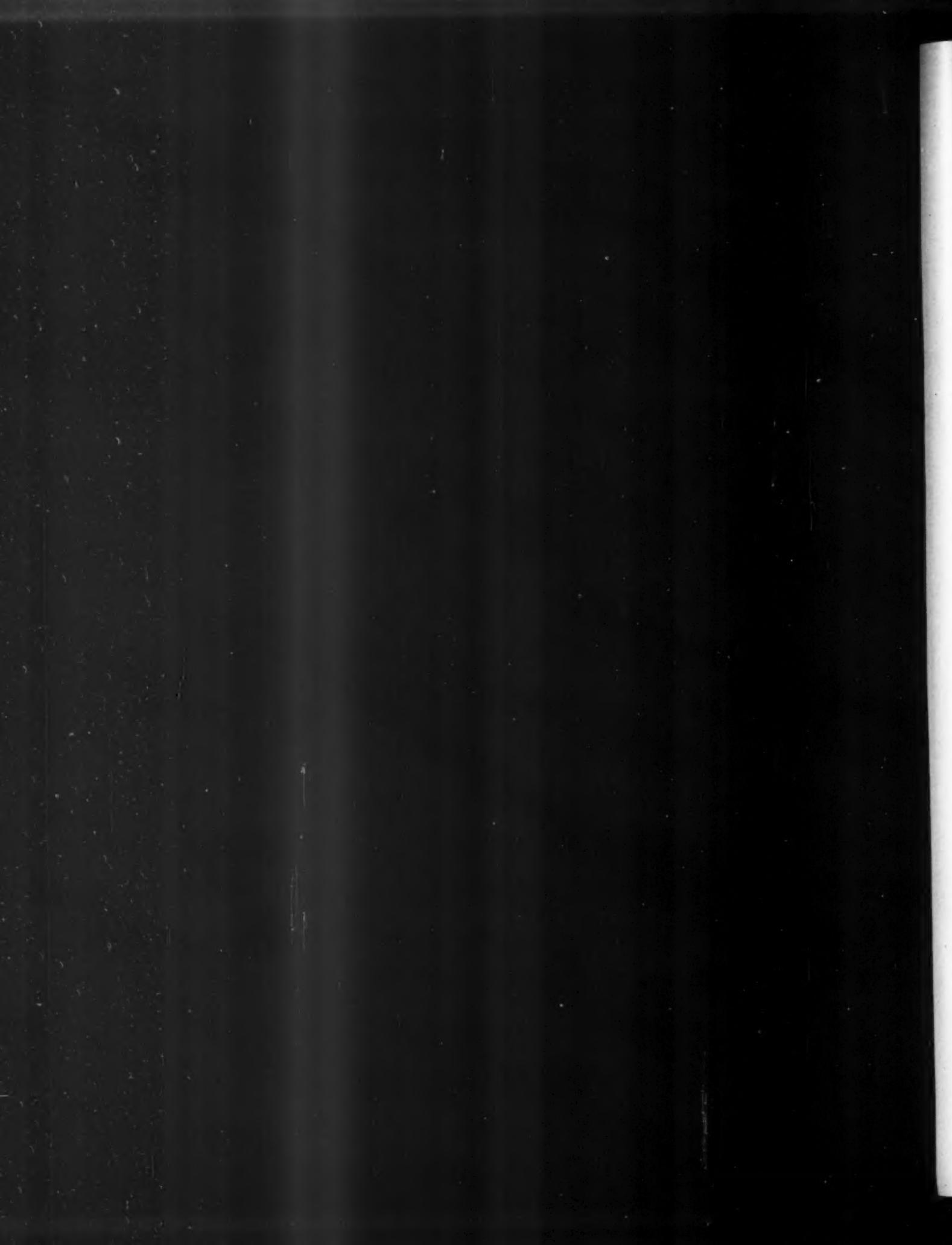
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## GUTTA-PERCHA IN THE PHILIPPINES.

WE print on another page some references to a recent report from the forestry administration of the Philippines, which further confirms the belief that considerable Gutta-percha exists in that archipelago. The best proof of its existence is the growing exportation of the product, from which the government derives a revenue, besides which it is pretty certain that further amounts are smuggled out of the country by the Chinese, who, as they have done elsewhere, practically control the trade. The forestry officials, who have been giving intelligent study to the subject, are fearful that, before the Gutta-percha producing section can be brought under complete control by the government, the cream of the supply will have been exhausted.

It would hardly be fair to charge the Philippine government with being dilatory in respect to taking up the subject of protecting the Gutta-percha interest. A new government, like a new business enterprise, requires time to develop—time to get on its feet, so to speak. Especially is this true of the government of a people to whom the governing power comes as a stranger, who must take time to become known and understood, as in the case of the United States in the Philippines. The latest published annual reports of the government at Manila bring its record down to the end of the third year from the signing of the treaty with Spain, and one may well be surprised, after a study of these reports, at the progress that has been made by the new administration. One point to be made is that the Gutta-percha region is in the portions of the archipelago most remote from the seat of government, and that the attention of the Governor and his supporters has been claimed by matters really of greater importance than protecting the Gutta-percha from theft by the Chinese.

But when matters have become so well regulated that no gutta is exported without paying duties, the problem of protecting the trees will still remain to be solved, and we think that, on this point, the recommendations of Dr. Worcester, the secretary of the interior for the Philippines, are worthy of attention. He would have the government establish a monopoly of Gutta-percha, all of that commodity to be confiscated that is not brought to the government stations, or is not collected according to regulations. This would check the indiscriminate destruction of the trees, and pave the way for improved methods of extraction.

It may be that any other method of extraction than by felling the trees cannot soon be enforced. Then let rules be adopted for getting all the gutta from the trees, instead of letting 90 per cent. of it go to waste, as is now the case. It ought to be a simple matter to get at all the Gutta-percha in the bark of a giant tree, whereas now none is secured beyond a few pounds from each tree resulting from "ringing" the trunk. We are satisfied that the authorities will work in this direction until ultimately the present wasteful methods are effectually prohibited, and hope that they may succeed before the greater number of the trees have been felled. It is interesting to note, by

the way, the confidence of the Philippine forestry bureau in the practicability of Gutta-percha culture, based upon the progress that has been made in this direction in recent years in Java.

#### STOCK QUOTATIONS AND BUSINESS.

A RECENT article in these columns referred to the utility of the stock exchange in helping to fix values of corporation securities, and the proved necessity for such an institution. But it does not follow that the conditions of all business are to be gaged by the upward or downward tendency at any particular time of stock exchange quotations. During the past month prices of listed securities have been unusually low, but any inference from this fact alone, reflecting upon conditions of industry and business in the United States, would undoubtedly prove erroneous.

About the middle of the month a statement of the current quotations for fifty important listed stocks, compared with the highest quotations recorded in 1902 for the same securities, showed a decline of over \$1,000,000,000 in the value of their combined share capital. Nobody will say, however, that the intrinsic value of the properties represented had been decreased by this amount. Many of the securities referred to are still new and not thoroughly tested as to value, and both the high and the low "records" in any given case may have been accidental or at least made without reference to real values or earning capacity of the property. Certainly the total capital stock in no company on the list ever represented at any time so great a total investment as the high water mark on the quotation sheet, and at the moment of greatest depression the holders of no company's shares sold out completely. Again, while a "loss" of \$1,000,000,000 may seem enormous, the total face value of the fifty securities is very many times greater.

Opposed to this apparently bad indication, are the facts of the bountiful crops growing or harvested, the busy condition of factories, the profitable operation of transportation lines, the general employment of labor at fair wages, and the absence of important strikes—all favorable auspices, without any evidence that a change for the worse is near.

Then what is the utility of "Wall street" quotations, if they do not tally with plain indications of prosperity? Their immediate use—apart from telling each holder of a stock what its marketable value is at the moment—is to puncture inflated capitalizations. They speedily show, when millions in shares are issued against properties worth hundreds of thousands, something near the true values. They caution a man not to estimate his fortune by the par value of his stock certificates, and plan new investments accordingly, but to look at the intrinsic worth of what he owns. But for the stock exchange, by means of which investments become subjected to the closest scrutiny, many a man with inflated stocks hidden in his strong box would imagine himself rich when he had nothing, and opportunities for fraud would be vastly greater than now.

It should be added that the era of great industrial corporations is still too recent for even their promoters and managers always to be able to appraise their values rightly, and stock exchange prices register only the public's appreciation of them, which is not necessarily always just. The tendency, though, is toward more scientific accounting and a more intelligent estimation of capital values, and as this tendency is developed, fluctuations in share prices will be restricted to narrower limits. Meanwhile the owners of soundly conducted businesses are not greatly disturbed if at any given time the public may be less inclined than at another to buy an interest in them. And those businesses which are not conducted with a view to affecting prices in Wall street—the greater part by far of the whole—may be enjoying the utmost prosperity while the shares of the speculative concerns are having the greatest "slumps."

#### A CASE OF SELF PROTECTION.

WHILE it is an acknowledged fact that the ordinary rubber compounds are matters of general knowledge, that is to expert manufacturers, it is not true that the mass of the workmen know them. Further than this, no good purpose would be served if they were possessed of such knowledge, for the possession of formulas  $X^1-14$ ,  $Z^2-20$ ,  $A-25$ ,  $C-10$ ,  $F-2$ ,  $R-1$  without the general ability, experience, and discretion that their proper use requires, is a damage rather than a blessing. It has therefore come to pass, that the ordinary compound card reads something like the table that is shown in the margin.

To the workman this means nothing, although to one who knows the general line of goods made and is possessed of samples of the stock produced it would be quite easy to arrive at the mixture. It is a curious fact, however, that the manufacturers are not trying to blind the eyes of those who are quick to see. On the contrary, to give them information is to make them more valuable. They are simply obliged to keep from unthinking men, knowledge, that in the first place, is none of their affair, and in the second place that once possessed of, renders the possessor unfit for his position. This may seem harsh, but many otherwise good workmen are drifting from mill to mill to-day trying to peddle compounds which they do not comprehend, and which are not their property anyhow. When the workman can throw away his book of formulas and out of his own knowledge combine rubber and compound so as to get any ordinary result, he ceases to be dangerous and for him the cipher code is unnecessary.

So well has this plan worked, by the way, that some manufacturers go even further and have steam gages with their own special dials, and thermometers that are neither a "F" nor a "C," and from the manufacturer's standpoint it works exceedingly well. Many workers do not like this sort of misnaming and unusual recording, but after all the compounds and the heats are trade secrets that belong to the manufacturer. Why should he not guard them?

## RUBBER AT THE OSAKA EXHIBITION.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The fifth national industrial exhibition at Osaka, which opened on March 1, is not only more extensive than its predecessors, but more complete in many ways, and indicates a continual advancement in Japanese industries. Besides, the increasing number of foreign exhibits shows a growth of interest abroad in the markets of Japan.

Your correspondent has taken pains to look through the exhibition for products of the rubber industry, giving attention first to the industry in Japan. There are, as THE INDIA RUBBER WORLD has reported from time to time, several small rubber factories in this country, principally in or near Tokio, though only a few of the more important ones have made exhibits. It may be said, by the way, that most of the concerns are too young to have made much progress, which probably has restrained them from attempting to attract attention in comparison with more important establishments, and particularly the exhibitors from abroad.

The most extensive display of Japanese rubber products is that of the Meiji Rubber Manufacturing Co., in the manufacturers' building. This includes specimens of all their products, which include a wide range of mechanical goods, such as hose, belting, packing, valves, rollers, matting, tiling, truck tires, etc. It is an attractive display, and, considering the small limits of their business, as compared with the industry in other lands, a very creditable one.

In the same building is the display of the Mitado Rubber Co., also of Tokio. Their products consist of mechanical rubber goods and toys. The Oriental Rubber Co. and the Nippon Rubber Co. might have been expected, from the importance of their business, to make displays, but they failed to do so. In the Educational building, among the products of the Osaka Industrial School are some rubber water bags.

There is a special building allotted to Canada, in which the Canadian Rubber Co. of Montreal have installed an extensive display of mechanical rubber goods, druggists' and stationers' sundries, boots and shoes, and waterproof goods.

The Gorham Rubber Co. (San Francisco) have installed a display of goods of the same classes in the Foreign Sample building, comprising, so far as I have been able to see, about the only rubber goods from the United States.

The important Italian rubber firm of Pirelli & Co. (Milan) shows a wide variety of their products, including a diving suit. J. G. Ingram & Son, of the London India Rubber Works, display a collection of surgical and other India-rubber goods of their manufacture. There were other specimens of rubber goods, shown mainly by representatives of foreign machinery houses—as by Birch, Kirby & Co., Limited, agents for several British firms—but as thus shown such goods naturally are not prominent.

In another department, related to the rubber industry, the Japanese are better represented, that of electricity. Special mention must be made of the Andrews-George Co. and the F. W. Horn Co., of Yokohama, who have erected a special building for the display of electrical apparatus.

The machinery in the Machinery and Transportation buildings, and throughout the exhibition, is run by a dynamo made by the Sibaura machine works.

A collective exhibit of insulated wire, made by Japanese firms, includes about 70 different items, including insulation with India-rubber, Gutta-percha, paraffine, and weather proofing compounds. The Yokohama Insulated Wire Co. exhibit a number of large coils of their wires and cables. Many foreign

merchants exhibit specimens of American and European insulated wires, in connection with displays of electrical machinery.

From what I have seen, I am convinced that Japanese rubber manufacturers and Americans interested in this market for rubber belting cannot afford to overlook the competition of Dick's Balata belting and of cotton belting, which are rapidly coming into use.

Mr. C. K. Ogiwara has resigned his position with the Oriental Rubber Manufacturing Co., being succeeded by Mr. Yoshida, late of the Meiji Rubber Manufacturing Co.

Tokio, Japan, June 26, 1903.

J. K. L.

## A GERMAN VIEW OF AMERICAN BUSINESS.

FROM THE GUMMI-ZEITUNG (DRESDEN).

IN the German daily press of late there have been accounts of the business report of the United States Rubber Co. (the rubber shoe trust) for the year 1902-03, in which a favorable result of this enterprise is stated. There is represented to be a net revenue of \$1,384,000 against a capital of \$23,525,500, or about 5.7 per cent. The *New Yorker Handelszeitung* brings a like representation. But if we look closer into the business report of this trust enterprise, about the formation of which we published detailed articles last year, we shall find an altogether different state of things, and that the reports in the press are decidedly incorrect. The capital is not \$23,525,500, but \$47,191,000, or more than double, viz.: \$23,525,500 preferred and \$23,666,000 common stock. The return on this enormous capital at \$1,384,000 is not 5.7 per cent., therefore, but only about 2.9 per cent., and this must be considered as an extremely poor result.

If the trust has accomplished nothing but to bring an industry once highly lucrative to the verge of nothing, this can only be termed prodigality in the sense of national economy. It confirms the opinion of those who have taken a skeptical attitude toward such enterprises. Our German capital and our industries may take this result as a warning. Only 2.9 per cent.! And in a year which the very business report exemplifies as one rarely favorable to the rubber shoe industry; in a year where the prices for raw Caoutchouc were so low that any rubber factory, under even fairly good management, should have come out with a much higher profit.

Of course, if one sees at what ruinous prices the United States Rubber Co. dispose of their goods in foreign countries, one must give up hope that the company can ever be in a position to improve upon their figures of profit. The prices which the United States Rubber Co. have made in the Orient, for instance, are simply unheard of; prices which simply mean loss. One can only conclude that the company want to throw their goods at any price on the European market, in order to keep busy under all circumstances the many factories bought up beyond the measure of reason, instead of simply closing some of them and reducing production.

As for prices, the business report, reproduced in the June number of THE INDIA RUBBER WORLD, says that they "have ranged about the same as in the previous year, when there prevailed the lowest prices for rubber boots and shoes (the cost of material being considered) ever known in the history of the trade." In proof of which it is stated that during the last two years five companies manufacturing rubber shoes have gone to ruin or withdrawn from business. This is correct, but it is not mentioned that it was this very United States Rubber Co. which, two years ago, quite unnecessarily and suddenly, lowered prices about 27.5 per cent., thus bringing them to such a level as to exclude any profit. This action was directed against the outside factories, on the idea that an oppor-

tune time had arrived to "freeze them out"—to starve them. This action was only partially successful, though it cost the trust about \$18,000,000—its whole working capital—and it is to-day a question from what it is going to pay the \$12,000,000 of "funding notes," in view of the relatively small liquid means which the report shows.

Deplorable again seems to be here the superficiality of our daily press, which gives space to these rose-colored reports without even taking the trouble to examine them. Thus propaganda is being made for trusts, which prove so ruinous to industry. If our people should be content with a total interest on capital of 2.9 per cent., apart from the fact that by such enterprises the capital is entirely hung in the air, it could in tranquility cease to work and there would be no need to form new industries. For even the simplest business, on the lowest scale of culture, would yield as good results.

#### RUBBER FROM BRITISH GUIANA.

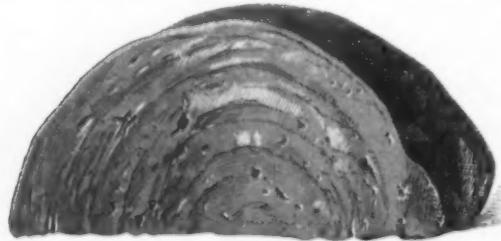
TO THE EDITOR OF THE INDIA RUBBER WORLD: I have the honor to forward a small sample of rubber prepared by the Indians on the Caramang, a tributary of the Mazaruni river, in British Guiana, communicated to this department by his Excellency the Governor.

I should esteem it a favour if you would be good enough to obtain a brief report and a valuation of the sample which, in some respects, resembles Colombian virgin rubber. It is derived from native trees and is so far the finest sample of India-rubber I have seen from the forest of British Guiana.

Thanking you in anticipation for your kindness in this matter, I am, Sir, your most obedient servant, D. MORRIS.

Commissioner of Agriculture for the West Indies.

Barbados, 15th June, 1903.



SECTION OF BALL OF BRITISH GUIANA RUBBER.

THIS rubber upon examination looks very much like many of the African sorts—for example, Mozambique ball, although the latter is stronger in fiber, and has a woody smell rather than the pungent odor noticed in this sample. It reminds one very much of the Cauchó ball which was formerly in the New York market. It should be classed with such rubbers as Esmeralda sausage, but would probably shrink a little more on the moisture, but less as far as bark is concerned. It would probably shrink from 15 to 18 per cent. At the present market it is worth about 65 cents per pound. There is no doubt but what the rubber could be made stronger and cleaner by some different method of collection. The sample sent looks as if the rubber was coagulated in the cuts on the trees. If this is a fact, it does not show up very well. That is, it has not an extra strong fiber, and it develops tarry spots in the mass. It is, however, a good marketable rubber, and well worth gathering. We should be pleased to hear further particulars concerning it. An identification of the tree from which it was taken would be particularly valuable.—THE EDITOR.

#### RUBBER FROM SOUTHEAST AFRICA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Some friends of mine are interested in some ground on the east coast of Africa on which rubber trees grow, and are anxious to know the value of the product. I have taken the liberty to send you a small ball of the same and would feel greatly obliged if you could let me know the market value in New York. I am told that considerable quantities can be secured.

I have the honor to be, Sir, your obedient servant,

WM. D. GORDON,  
United States Consular Agent.

Johannesburg, Transvaal, March 16, 1903.

THIS is a fine sample of rubber of the Benguela type, which has been wound in a ball upon a spindle. Rubber like the sample, at the present state of the market, would bring from 60 to 65 cents per pound, and it, as our correspondent states, considerable quantities can be secured, it would find a ready sale.—THE EDITOR.

#### MR. JOHN HOLT'S INTEREST IN RUBBER.

IN writing to us for information concerning "root rubber" species, Mr. John Holt, of the Liverpool shipping firm of John Holt & Co., Limited, states that if it can be found that such plants exist in the British African possessions, he would be interested in establishing machinery for the preparation of the product. Recently Mr. Holt's firm received from the French Congo specimens of root rubber, from a plant supposed by the sender to be *Landolphia Thollonii*, or *Clitandra gracilis*, a variety very similar. This shipment, by the way, was the basis of the reports lately telegraphed around the world of the discovery of a valuable new rubber plant. The existence of "root rubber" plants of several species has been reported in different parts of British West Africa though this type of rubber has been commercially exploited as yet only in Angola and the Lower Congo. It is possible, therefore, that the *Landolphia Thollonii*, which appears to be one of the valuable sorts, may be found in the region in which Mr. Holt is interested.

#### NEW TRADE PUBLICATIONS.

THE CANTON RUBBER CO. (Canton, Ohio) issue an illustrated priced catalogue of their Fine Pará Seamless Rubber Goods, including gloves, face masks, finger cots, ice bags, nipples, and various articles such as traveling cases, nursery bags, sponge bags, surgeons' and domestic aprons, etc., in connection with each of which appears suitable descriptive matter. It is a good catalogue. [6"×7¾", 28 pages.]

EUREKA FIRE HOSE CO. (New York) issue a new catalogue of their fire hose products, each brand being adequately illustrated and described, in addition to which the book contains an account of the development of the company, since its establishment in 1875, and interior views, showing work in progress in the various departments. It is not only a very complete trade publication, but an attractive one, and is interesting as reading matter, beside. [5¾"×6¾", 46 pages.]

THE Chicago branch of the HOME RUBBER CO. (H. L. Davis, manager) issue a new booklet—Special Catalog No. 101—which they are sending out to customers and to the general trade on application. It is small, but unique and full of good points on mechanical rubber goods, and just what a buyer may appreciate as a handy pocket edition of lists and general information on this class of goods. [3½"×6½", 20 pages.]

FIRESTONE TIRE AND RUBBER CO. (Akron, Ohio) issue an illustrated booklet, "The Way to Apply Firestone Side-Wire Tires," giving full details on this subject. [3¾"×6¾", 12 pages.]

## RUBBER PLANTING ON THE Isthmus of TEHUANTEPEC.

*As Seen by the Editor of "The India Rubber World."*

## FOURTH LETTER.

Across the Isthmus.—Plantation "San Francisco."—View of the "Ubero" and "La Crosse" Plantations.—The great Tehuantepec Plain.—At the El Globo.—Attacked by a Vampyre.—The Zapotaco Women.—Dogs and Fleas.—Salina Cruz.—Back to Santa Luceria.—Mexican Justice.—Sleeping under Difficulties—A Night at a Railroad Camp.—A Tapir Hunt.—The Persistent "Pinoleo."—Achotal again—Journeying North.—Cattle Ranching.—Taxes.—Cordoba and Orizaba.—Mexico City.—A Look Backward.—The Cow Pea and Velvet Bean.

THE last letter of this series left us just boarding the train at Coatzacoalcos for the journey across the isthmus to the city of Tehuantepec. The journey did not take the whole of the month that has intervened, but it took long enough in all conscience, yet it was not without interest. Almost at once I struck up an acquaintance with a German named De Verts, whom I soon learned owned the plantation "San Francisco" up in the Dos Rios region. His plantings were of coffee and *Castilloa*, and of the latter he had some 60,000 trees two and one-half years old. These were planted  $7\frac{1}{2}$  feet apart one way, and 15 feet apart the other, with coffee between. His trees averaged about 8 inches in diameter. From his description the stand appeared to be an excellent one.

After his departure a friend promised to point out to me a man, who more than any other down that way, was making "easy money"—none other than a traveling dentist who finds his patients only among the natives. He goes from village to village doing a rushing business at great profit. It is said that many who have no trouble at all with their teeth have them filled in order to show the gold, and that they never weary of grinning, with that end in view. I did not see the dentist, for at this juncture we stopped at a station, where on a siding was a private car, on the platform of which stood Sir S. Weetman Pearson, the famous English constructor of tropical railroads. We all wanted a sight of him, and were rewarded by a brief view of a thick set, determined looking Britisher, who had an air of meaning business all the time. He was said to be discharging men right and left, and generally upsetting the policy of procrastination and inefficiency that had been more or less characteristic of the management in the past.

The National Tehuantepec railroad is without doubt of great present and prospective value, both to the planters and to the owners. Its trains, which run every other day, are always well patronized, and it is wonderful how those children of nature,

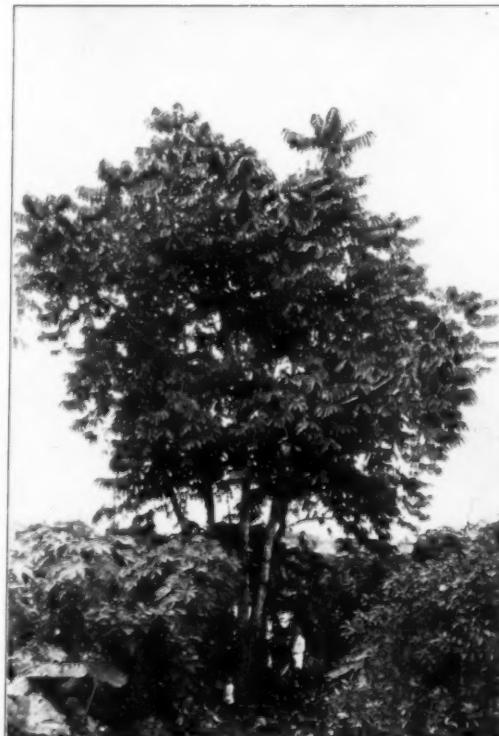
the Indians, enjoy crowding into the third class cars, and riding even a few miles. Many of the poorer ones save money for months, ride fifty or a hundred miles, and contentedly walk back. To them the trains are "flyers," and the cars palatial, but to the white man the many delays, particularly at stations, are very irritating. A resident of the country accounted for the long waits by stating that an engineer is paid \$2 an hour, and therefore the longer the run, the more he gets. He further intimated that if the train got on too fast, steam was allowed to get low, or some of the machinery suddenly needed repairs, for which a stop was necessary—but the narrator may have been yarning.

Shortly after noon we passed the handsome plantation house of the Boston Ubero company, and had a good view of the many acres of pineapples that they have under cultivation. We also had a view of the land of the Isthmus Rubber Co., a little later, and still further on was the La Crosse plantation company, which showed many acres planted to sugar cane, and considerable rubber.

Early in the afternoon we passed over the low mountainous ridge that separates the Atlantic side from the Pacific, and left behind the hot moist atmosphere that had become somewhat trying, and were in a climate bone dry, and seemingly much cooler. We next had a fine view of Rincon Antonio, the new railroad town that is rapidly assuming shape, and that will give to the workers in the shops a fine healthy climate instead of a fever ridden one.

Continuing our journey, we next came to the valley of the San Geronimo, healthy, cool, free from epidemics, and a little later to the vast Tehuantepec plain. Here are more than a million acres of rich land as level as a billiard table, covered with a sparse growth of chapparel, and awaiting only irrigation to turn it into a paradise. Nor is the water far off, for the mountains, which are in plain sight from the train, furnish abundant supply, and every opportunity for huge reservoirs.

After a stop of twenty minutes at a small station to watch a man who was chopping wood—at least that was the only apparent reason—we reached our journey's end, arriving at the city of Tehuantepec two hours late. We had elected to stop at the El Globo Hotel while in the city, and in that made no mistake, for it is the best there. From the proprietor's own advertisement I have it that there are "Rooms facing two different street. Comodios and well ventilated." Moreover, with the



WILD RUBBER TREE ON COATZACOALCOS RIVER.

true up-to date hotel spirit, he has the following card in each room:

The proprietors of this hotel are only responsible of lost of valuable objets or money when delivered to themselves by passengers.

He handled the English language well, and knew it, and had a profound pity for a physician nearby who put out the sign "Englische Espoken." This hotel man was well worth the journey to Mexico to meet. He is by birth a Frenchman, who came over with Maximilian, and, after that unfortunate ruler lost his head, elected never to return. He is very short, alert, and is the picture of vigorous old age. Occasionally he gets a bit over-stimulated, and then puts on an immense pair of cavalry boots, and strides about the place, giving orders in a thunderous voice, and entertaining his guests with reminiscences of European wars that are full of thrill, dash, imagination, and doubtless some facts.

The hotel was a large rambling one story affair, with tiled floors and small cell like rooms opening out on an inner court, that contained both dining room and kitchen. Each bed room contained two folding canvas cots, each of which had one sheet, one red blanket, and one little striped pillow that was as hard as if stuffed with shot. There were also two chairs, a table, and a wash bowl and pitcher of agate ware. The one window opened to the floor, and to keep thieves out and guests in was latticed with half inch iron bars. It was luxury, however, when compared with the native huts, and we rested well, and had no adventures. To be sure I did have a queer experience the first night, when I lay for a while with one hand hanging down by the side of the bed, and on drawing it up *something* dropped off with a soft thud that had me wide awake in an instant. A light and a search revealed nothing and I came to the conclusion that it was one of the small vampire bats that are common in Mexico, and that alight so gently on man or animal that even if wide awake they do not know it.

So common are they, and so troublesome, that horses and mules are invariably kept under cover after dark, as these little blood-seekers rarely venture into houses.

The next morning it was quite cool, as a norther was blowing, and the thermometer registered only 95. On arising we

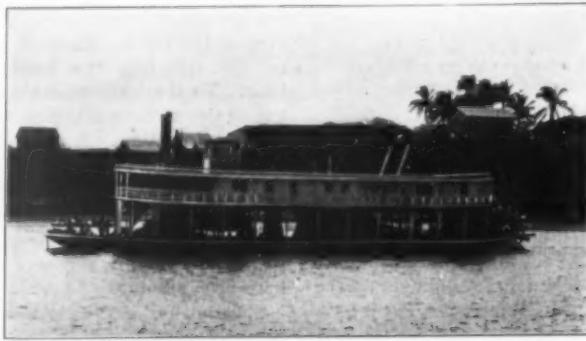
took our clothes in our arms, and, clad only in pajamas, walked down the sandy street two blocks to the baths, where we luxuriated for an hour or more. After coffee we visited the market, and saw the far famed Tehuantepec women in their very striking headdress, of which so much is said; but aside from its becoming effect, no one seems to know much about it. I personally was interested to see how it was made, and so walked behind some of the dusky beauties as they marched off, and took a good long look. The headdress is simply a white dress with a wide flounce around the bottom. This flounce is starched stiff and put upon the head so that it stands up like a huge ruffle. The rest of the garment, sleeves and all, hang down the back. I almost wish, however, that I did not know

this, as the effect is not half as artistic since my eyes were opened.

There was really little of sight seeing in Tehuantepec; the market, the *pueblo* across the river, the ruins left by the earthquake four years before, were about all. Perhaps it was the climate, but it was more fun to sit on the brick sidewalk in front of the hotel and watch passers-by, dog fights, and predatory pigs than to chase around after information. Anyhow, there was no rubber grown there, and rubber was my errand to the Isthmus. Speaking of dogs, every Mexican and Indian in the hot country is a dog owner on a generous scale. Nor does he care what the breed, or the size, as long as the dog has four legs and a bark. They are, as a rule, a mangy lot, exceedingly lean, and many of them are really half coyote. All are plentifully supplied with fleas, which they generously divide with all with whom they come in contact.

We left Tehuantepec on the morning when the first case of smallpox was reported, not for that reason, but because our visit was ended. It is a curious coincidence, but our departure from Coatzacoalcos was marked by the reporting of their first fatal case of yellow fever.

In spite of the fact that the clock at the El



STEAMER "DOS RIOS" ON THE COATZACOALCOS.



THATCHED VILLAGE ON THE "UBERO" PLANTATION.

Globo had stopped, that the town clock in the plaza was slow, and that no one knew within half an hour just what time the morning train left, we succeeded in catching it, and arrived in Santa Lucretia in time for the midday meal. Major Elliott, whom we met on the way down, gave us a hearty greeting, but



"LA TRINIDAD." FIVE YEAR OLD CULTIVATED RUBBER.

could give no information regarding the construction train to take us back to Santa Rosa. There were, he said, rumors of an accident, and no train had been through for two days. Some said it would be a week before they would be running again. As it had set in to rain hard we possessed our souls in patience, and prepared to spend the rest of the day and the night with the Major. He readily made room for us, although the house was full, and then proceeded to give us an idea of Mexican justice. It seems that an Italian workman, on a prolonged drunk, had for some days been terrorizing Santa Lucrezia. After he had chased natives to his heart's content, he fell into the habit of bombarding the Major's hotel with stones, and casting lurid reflections upon the character of all its inmates, from the proprietor down. These attacks were passed over with silent contempt, until one of the stones hit the Major's son, who lost his patience and, with promptness and despatch, thrashed the aggressor. Unfortunately in the doing of this he made the man's nose bleed, whereupon he was promptly hustled off to jail in a neighboring town, and it was only after three days of diplomatic and financial effort that he was released. The Italian was not arrested.

The Mexican laws, as will be seen from the foregoing, are radically different from those that are so often broken in "The land of the free and the home of the brave," but they are well fitted to the natives of that country, and act as a restraint to visitors, particularly those who feel superior to the dark skinned owners of the country. For example, if a foreigner gets in trouble with a native, even if the latter attack him first, he is apt to be treated very much as if he were the aggressor. I know of one case, and heard of several others, where Americans were attacked by drunken or angry *mozos* armed with *machetes*, and who, to save their lives, shot their assailants and were quickly arrested, and in spite

of the fact that they proved that they acted only in self defense, remained in durance from six months to a year there before being released. This of course is not right, and yet, for the vigorous,—many times lawless—irresponsibles that crowd into a country that is just awakening, as Mexico is, some such law is

an absolute necessity, or the anemic native population would be crowded to the wall, or wiped out. There are many provoking things about the Mexican laws; for example—if a lumber team should run over and kill a native, the authorities in their anxiety for witnesses, and to place the responsibility, are apt to arrest not only the drivers of the team, but all the rest of the gang, and for a time look with suspicion on everybody connected with the lumber business.

The afternoon wore slowly away, and it rained harder every minute. At last came supper, and then bed. Here, as elsewhere, folding canvas cots were the only beds used, and while they are superior to an earthen floor, they do give one a crick in the back. Still we were thankful for our many mercies, and settled down to sleep. One by one the dim oil lamps were extinguished, and all was quiet except the monologue indulged in by one guest who was somewhat inebriated. The Major reasoned with him, begging him to go sleep, which at last he did; but the relief was only temporary, as he soon began again talking in his sleep. Just as, used to this, we were dozing, a sudden crash shook the house—a guest had fallen out of bed. The Major told him what he thought of such carelessness, and what he would do if it happened again, and once more quiet reigned. For a short time only all was still, and then clump, clump, clump along the passage between the cots came a heavy tread. Peeping out from between the mosquito bars I saw a man clad only in heavy boots tramping up and down the room. The Major discovered him at the same time, and wrathfully inquired what he was about. "Just taking exercise," was the reply. Then really the Major let himself out. It was truly a rhetorical masterpiece that he delivered himself of, and the offender at last reluctantly agreed to put off his constitutional until the morrow, and went back to bed.

It was still raining when we awoke, and we sat around all the forenoon waiting for the train, or for better weather. It was then that, looking at the passing *mozos*, I had a chance to see the native raincoats of cane and cocoa fiber that are the only mackintoshes the Indians use. They look far better and cleaner in a photograph than otherwise, and rubber manufacturers in



THE TEHUANTEPEC MARKET.



"LA TRINIDAD," FIVE YEAR OLD RUBBER AND COFFEE.

the States need not fear that northern markets will ever seriously seek them.

At 2 o'clock that afternoon, as it was raining only a little, we loaded our belongings on a *moso*, and started to walk the track to the railroad camp, 12 kilometers away. We got there finally, boots covered with mud, damp, perspiring, and weary, and were welcomed to the engineer's quarters, that consisted of five box cars fitted up as dwellings, full of material comforts, and inhabited by several young and friendly Americans.

The head of this engineering household was Mr. F. M. Ames, chief engineer of the Vera Cruz and Pacific railway, who has for seventeen years been at work railroad building, all the time in the tropics. Indeed he headed the corps that surveyed the National Tehuantepec road, cutting his way through the densest sort of jungle, and establishing camps where now are thriving settlements. Mr. Ames knew the country, the people, and the animals, and we were soon launched into talk about the wild dwellers of the forest. Of the cat tribe, there are quite a number of large and active specimens. The leader of all these is the ounce, or as the natives call it, the "*tigre*," and next to him come a great variety of spotted cats, diminutive specimens of the jaguar tribe. They never attack man, and when hunted, invariably take to a tree, although before doing so they often stop and finish a dog or two, which they are fully capable of doing. They are more or less of a nuisance, about plantations, as they have a great fondness for turkeys and chickens.

Many of the smaller mammals of the temperate zone are also very common, such as foxes, rabbits, skunks, squirrels, black and brown, and monkeys. This latter animal, I regret

to say, was conspicuously missing at the time of my visit, the story being that a year or two before they had taken yellow fever, and nearly all of them died.

It was during this most interesting chat that supper was announced, and we were soon luxuriating on ham and eggs, hot biscuits, and fine coffee that the Chinese cook knew how to prepare to perfection. I could not help remarking that the Chinaman was already considerably in evidence as a cook in the cities, at railway camps, and on plantations. Indeed, there are many who believe that the labor problem for the planter will be solved by the importation of a sufficient number of them. It is the general judgment, however, that while they may be taught to clean the rubber from weeds and vines, and to do a certain amount of cultivating, they will not be of much use either in forest clearing, or in tapping. In addition to this, the prices that the Chinese companies want for securing coolies is at the present time much too high to allow of their profitable use.

Mr. Ames, his two assistants, Messrs. Jones and Hawkins, my companion and I spent a very pleasant evening in what perhaps might be called the parlor car, and later adjourning to the sleeping car, forgot everything earthly until awakened in the early morning by the shrill whistling of a locomotive. This was the signal for breakfast, and an early start. In due time we boarded a flat car in front of the engine, and were off for Santa Rosa. We sat in a row on the extreme front of the car, ready to jump if it left the track. Along the route the worthy chief showed us where such slight mishaps had occurred, explaining that, until the coming of the dry season, and it was



"DEL CORTE." ADMINISTRATION BUILDING AND RUBBER TREES.

possible to put in ballast, such a condition of affairs had no remedy.

We reached Santa Rosa in due time, and as a souvenir of my visit, Mr. Ames gave me a *cedrilla* nut, a native remedy for all kinds of snake bites, as well as for coast fevers. I have since learned that the mahogany cutters, and other foresters of the tropics, put great faith in it, and rarely venture into the forest without it.

Leaving the railroad we struck into the new trail already mentioned, hid our luggage until a *moso* could be sent for it, and started to walk to "La Buena Ventura." The rain had ceased, the sun was shining brightly, and every bird in the forest was singing a song of rejoicing. Not always in tune, however, for the genuine feathered warbler of the hot country is not at all musical. The *chachilatta* thinks it sings, but as a matter of fact it simply "chachilatters," and that word just describes the sound. A sort of wild hen is this bird, and one that is in constant hysterics.

After a walk of about fifteen minutes, we emerged from the forest and ascended to the higher ground where grows the rubber. To our regret we arrived too late to join in a tapir hunt that took place in that very orchard. The tapir is the largest wild animal on the isthmus, and although quite plentiful, is so shy that rarely seen. It is perfectly harmless, and its flesh is esteemed a delicacy by the natives. One of them by some chance wandered into the rubber, and the son of my host fired a charge of shot, knocking him over. He recovered in an instant, and rushed away, taking another charge with him.

We did not tarry to talk tapir, however, but hastened on, both of us anxious to get our mail. As I had received no letters since leaving the city of Mexico, that longing had a reasonable basis, but when I appreciated the difficulty in getting letters through, I did not wonder at the delay, but marvelled that any mail at all reached me. So we hastened on over the rubber covered hills and finally reached the ridge on which stands the house and on which too is grouped the marvelous collection of tropical plants and trees referred to in a previous letter. Many of these by the way were obtained through the courtesy of the officials in far distant British botanical stations, notably, Calcutta, Singapore, and stations on the west coast of Africa. Indeed Mexico owes to these officials and to Mr. Harvey's enterprise the introduction of the mangosteen, jack fruit, bel fruit, as well as the *Kickxia Africana* and the *Hevea Brasiliensis*.

We reached the plantation house at last and everyone welcomed us warmly. The tame macaw, the little green parrot,

quette, Lora the parrot, and even Bola, the big yellow tomcat, vied with the dogs in an enthusiastic ovation. Things seemed to be about as we had left them, and except for the fact that my black shoes had gathered a fur of green mold, and one of them was occupied by an enormous spider, I was perfectly content. Speaking of spiders, there are many of them, but they are the least of the insect troubles. If let alone they are harmless and not much in evidence, but the *rodador*, the *pinoleo*, the *chaguista*!—they are looking for trouble. The *rodador* is like the black fly of the North American woods. It is in some places most abundant, and its bite raises an itching lump that lasts several days. After a little, however, one becomes inoculated with *rodador* virus, and the only result is a small black spot that scales off without any itching or burning. They trouble some newcomers exceedingly, but I found them only a slight discomfort, not important enough to take any special precaution to mitigate.

Of the insects that are most easily domesticated, and that attach themselves with instant affection to the passing traveler, I should name the *pinoleo*, the *conchudo*, and the *garrapata*. They are all related, and are of the tick family. The *pinoleo* has a habit of associating with himself several million others, each one the size of a pin point, and hanging on a leaf or twig over a trail where animals or men are accustomed to pass. When the branch is touched, they instantly catch on to whatever touches it, and proceed to distribute themselves over the body and seek for tender spots whereupon to feast. I had a most abundant and energetic collection of *pinoleos* on several occasions, but got rid of them without much trouble.

The *conchudo* is simply a *pinoleo* that has not been blotted out early in life, and who grows into a fairly sizeable tick. He does not burrow into the flesh, but simply hangs on, and grows fat off the animal of his adoption. The *garrapata* is the *pinoleo* grown to maturity, and is a good large ablebodied tick that fastens himself upon his victim, and is very reluctant to let go. Another little pest that troubles some people is the *chaguista*, a fly so minute that one can hardly see him, and that hides itself in the hair of the head, its bite being like the sting of an electric needle.

There are of course mosquitos, although personally I was troubled very little by them during the whole of my trip, and ordinary fleas are to be found in the towns and cities from one end of the country to the other. The insect that I most dreaded, however, and which was described to me by many of the old time residents, was the *moyaquil*. This is a grub which



"DEL CORTE." CORNER OF RUBBER ORCHARD AND ROAD.

burrows in the flesh, and which when approaching maturity is about an inch long. It is supposed to be hatched from the egg of a fly, some say a butterfly, and is very easily disposed of if one knows what it is. When once imbedded in the flesh it has the appearance of a blind boil, but under a magnifying glass the head of the creature can be seen just above the skin, and a little sticky substance, such as rubber sap, suffocates it, and it is easily extracted.

The next two days were set apart for more plantation visiting, but my good luck, as far as weather was concerned, suddenly fled. It rained so hard that traveling would have been torture, and visiting folly, so on the third day I turned my face towards the city of Mexico—a far cry, however, for first must come a long afternoon's tramp along the railroad track to Achotal. We did it, reaching the town at dusk. Then followed the wait until 1 in the morning, when the train arrived. We waited on cots in Antonio's palatial shed, which we shared with *mosos*, dogs, pigs, mules, horses, and the "murderer." The last named was the only really interesting bit of scenery there. He appeared soon after the rest were asleep, and crouched by the side of the door of the next hut, his sullen face filled with hate, his hand toying with the hilt of a wicked looking knife. He wasn't after us, so we let him alone. At 12.30 we got up, took our traps, stumbled over a family of sleeping porkers that were lying in the passage between the huts, sidled down a narrow plank to the railroad track, squeezed in between a lot of *mosos* who, wrapped in blankets, covered the depot platform, and awaited the coming of the train. While we sat there one of the *mosos* roused up, and began to talk to my companion. After a time Mr. Harvey turned to me and said :

"Here is a most remarkable thing; this man was on his way to my plantation to get work, when some of the railroad men told him that I drove my laborers out in the field early in the morning, hitting them with the flat of the *machete*, that I fed them very poorly, and made them sleep in a fenced enclosure that had no roof over it, so he didn't dare come. That is the way they try to get our help for themselves."

At length, after an interminable wait, the train arrived and we got aboard. The train boy had some canned beans and crackers from which we made a hearty meal, and then, stretching out on the seats, slept as best we could until we reached the breakfast station at Perez. The breakfast was fair, but the fruit we bought later was really what made life worth living. At every railway station women and children gathered under the car windows with fruits, flowers, native made candies, and the great variety of sweet cakes of which both Mexicans and Indians are very fond. I got a dozen oranges for ten cents, and they were simply delicious. A fruit that I had been very anxious to taste was the *sapodillo*, produced by the tree from which the Chicle comes, and, finding them on sale at last, I immediately invested. It is about the size of an apple, with a skin like

the potato, the pulp tasting like gelatine filled with brown sugar. I also sampled many other fruits. Of them all, as might be expected, the banana is the most common, and I observed several varieties that are never seen in the States. Some tiny yellow ones, a little larger than one's thumb have an extremely delicate flavor, and are deli-



"DEL CORTE." LABORERS' CAMP AND CLEARING.

cious. Of this family is a large plantain which is either fried or broiled, never being eaten raw, and which is extremely palatable. There are a great variety of other fruits which appear at certain seasons, such, for example, as the sour sop, a sort of



"DEL CORTE." EXTENSIVE VIEW OF RUBBER PLANTING.

pear with a prickly alligator skin hide, and which tastes like sour snow mixed with cotton batting.

During the forenoon we rode through a country largely given up to cattle ranches. Of domestic animals in Mexico, the cattle are perhaps the most valuable, and even with the poor strain of stock that is bred many large fortunes come to the owners of the ranches. Beside this, those who go into the cattle business have no trouble at all in getting help, as the native Mexican is a natural cowboy, and if he has but a pony and a big set of spurs, he is willing to work as he will at no other calling. Some of the more progressive ranchers are crossing their cattle with imported stock, and getting fine results. Most of the rubber planters keep a certain number of cattle for their own immediate wants, and for feeding the help, and occasionally are able to get a little fresh milk; but few of the cows are good milkers, and for native use, goat's milk is very extensively used.

One thing that I had a chance to do on this forenoon's journey was to look over the notes I had taken relative to the manner in which real estate, and particularly plantations, are taxed. This is not an interesting subject to the casual reader, so if he will kindly skip a few paragraphs, and allow others the privilege of reading, it will be esteemed a favor. It seems that there is an actual tax for the transfer of property, which is called *traslacion de domino*, assessed in the following manner: 2 per cent. is charged on the value stipulated in the deed, provided that value is equal to, or more than the official value, the latter being the value on record established at the last sale of the property, or if there has not been a recent sale, established by the valuation committee, called the *junta calificadora*. This 2 per cent. is the state tax, and on this 2 per cent. is charged 30 per cent. federal tax. If this transfer tax is not paid immediately after the execution of a title, a fine of 24 per cent. per annum on the amount of sale, or the official value of the property, is charged. Government registration of a title is not allowed unless this transfer tax has been paid. This transfer tax applies only on real estate, and is charged only when properties change hands.

Country real estate (*finca rustica*) is calculated as follows: 6 per cent. of the value is figured; upon this amount 5 per cent. is charged as a state tax for the year, and upon this same amount 30 per cent. is charged as a federal tax. These taxes are payable the first of each quarter or yearly in advance. Failure to pay during the first month of each quarter subjects one to a fine of 6½ per cent. for the first month, 12½ per cent. for the second month, and for the third month, or thereafter, 25 per cent. The only

products in the locality that I visited where taxes are charged are coffee, sugar, and tobacco, and upon these 4 cents per *are* is levied. This *are* is 1/100 part of a hectare, and a hectare is 2.471 acres. On this 4 per cent., 30 per cent. is charged as a federal tax. These taxes may also be paid quarterly or yearly, and if not paid during the first fifteen days of each month, a fine of 6 per cent. is charged, and if not paid during the first two months of each quarter or later, 25 per cent. is charged. It will be seen that these taxes are very light, and the government gives the planters the privilege of making their own manifests as to the area of the land under cultivation, and invariably accepts these in good faith.

That night we spent in Cordoba, and the next morning went early to Orizaba to recuperate. We both were in need of rest, and felt the effect of that fine dry climate almost at once. Orizaba, be it said, is a most civilized city, quite a resort for health seekers, and its guardians look with great disfavor upon the free and easy inhabitants of the country south. I was somewhat indignant at the looks cast upon me by the policeman, until I learned that it was against the law to wear a revolver, so I gladly unshipped mine, and stowed it away in my bag. Not that the city is really prudish. It runs a big public gambling house, which every dweller patronizes, and the profits from which go for municipal improvements.

I met many Americans there, among them Maxwell Riddle, who was shivering with *calentura*, and was hastening back to Tierra Blanca to sweat it out; John W. Byam, on his way to the "San Marcos" plantation, accompanied by Mr. Wood, his manager, who was just back from the Congo Free State; Mr. Cavanaugh, of Perez, and many others.

We luxuriated in Orizaba, attended the theater, saw the poorest centimatograph show on earth, learned from the natives that the American national hymn is "There's a hot time in the old town to-night," and thus improved both mind and body.

Finally I was rested, and Mr. Harvey had secured a lot of rare orchids from a learned old Mexican horticulturist there, and further arranged for an exploring trip with him later, and the time had come to part. I tried hard to get him to visit New York with me, but with the true tropical dread of pneumonia and grippe, he sturdily refused. With a simple handshake we parted, but I wish he could have seen into my heart, and read there the gratitude that I felt, and how I appreciated the hospitality and consideration that he had shown to the tenderfoot who dropped in so suddenly upon him, rode his best horse, stole the affections of his parrot, and wore a hole in his favorite canvas chair.



"DEL CORTE." ROAD THROUGH RUBBER

On my return to the city of Mexico almost the first people that I met were Messrs. Warren and William Fish, Mr. Charles E. Sieler, Mr. S. D. Dorman, and Dr. W. S. Cockrell, all of whom have interests down in the Trinidad river district. I had met all of the gentlemen before, with the exception of the last named, and as he has been interested in rubber cultivation for nine years, I was glad to get an expression of opinion from him. He is a very earnest advocate of close planting. I believe he laid it down as a rule that the distances between the trees should be 6 feet and 6 inches. He has also gone into the subject of smothering the grass by the use of the cow pea, and strongly recommends the whippoorwill variety. He also said that his own observations proved that when the *Castilloa* was planted in a soil that consisted of a thin layer of loam over gravel, the trees did very well for three or four years, and after that seemed not only to stop growing, but that they produced very little latex.

His remarks remind me that in transferring my notes I left out my visit to "Filisola," a plantation that is not only an acknowledged failure, but that is practically abandoned. As the record of failure is often of more value than is the story of any number of successes, I am going to add it right here.

It was hot—awfully hot—as we climbed up the hillside to the rubber trees. On the way we walked in single file, constantly thrashing our leggings with switches to dislodge the clinging *pinoleos*. On the rolling ground above the landing we found a stand of trees, said to be 7000 in number, planted about twelve feet apart. Most of them were in the sun, but quite a lot were in among banana trees, and had good shade. Those in the sun were knee deep in grass, which was not of one year's growth, but showed a permanent sod. Those in the shade were free from grass. All of the trees, however, looked aged, not in size, but from the wrinkled condition of the bark, and the thin gray lichen that covered it. Yet those trees were but seven years old. They yielded some latex, but the most optimistic seller of rubber planting stock, had he seen them, would not dare predict that they would ever grow another foot. They looked matured, finished, discouraged, and a physical examination of the soil explained it. A thin leaf mold, then sandy clay with a trace of iron, then clay, and the

whole as dry as a smoked herring was what it showed. A variety of opinions were put forward as to the cause of the failure of this venture—mismanagement, poor soil, bad seed, grass, etc.—but to my mind the soil told the whole story.

Since my return to the United States, I have so many inquiries concerning the cow pea that I want to add a word concerning it. The botanical name of the ordinary variety is the *Vigna kantaing*. It is one of the well known leguminous plants of the southern states, grown partly for fodder and partly for hay. It makes the land richer because it returns to it so much of the mineral matter taken from the soil, and in addition much nitrogen taken from the air. There are a number of varieties used through the southern states, such as the "clay," the "unknown," and the "whippoorwill." The advantages of the cow pea are, it is a nitrogen gatherer; it shades the soil in summer, leaving it friable and loose; it has a large root development; is adapted to almost any sort of soil; stands heat and sunshine well; and if sown thickly, will by its rapid growth and shade effectually smother all weeds, thus serving as a cleansing crop.

There is another plant which rubber planters might well look into, and that is the velvet bean,—the *Mucuna pruriens* (var. *utilis*). This plant comes originally I think, from Tampa, Florida, and no doubt the Florida experiment station could tell all about it. It is said to have even a more luxuriant growth than the cow pea, and produces a great amount of vine, and a large yield of seeds. It covers the ground with so heavy a vine that it is reported to have killed temporarily even the cocoa and Johnson grasses.

When one is in a foreign country, and almost ready to start for home, and a bit homesick at that, there comes a moment when all deterrents are brushed aside, and one bolts. I had planned several days sightseeing, and a stop off on the way, but instead I bolted. I met all sorts of nice chaps on the return journey, yet it was a long week that elapsed ere I sighted the skyscrapers of New York. Now that I am here, I wish somewhat that I had stayed a trifle longer, and I find myself yearning again for the open air life, the strange experiences, and the glimpses of nature, luxuriant, triumphant. Will this wishful attitude draw me back there next winter—I wonder.



TREES ON "FILISOLA."  
[Photo Copyright by C. B. Waite.]



"FILISOLA" IN ITS PALMY DAYS.  
[Photo Copyright by C. B. Waite.]



"FILISOLA" WATER FRONT AT PRESENT.  
[Photo Copyright by C. B. Waite.]

## RUBBER PLANTING GENERALLY.

## PLANTING RUBBER WITH TEA IN CEYLON.

THESE pages have recorded from time to time the progress in the planting of rubber in connection with coffee in Ceylon and the Straits Settlements, or the replacing of coffee with rubber, on account of the declining profits of coffee culture, and the feeling of the planters that it is better not to have "all of one's eggs in one basket." Of late a similar attitude in regard to rubber has been shown by the tea planters, whose interests in these colonies are even more important than the coffee interest. At the fifteenth annual meeting (June 15) of the Ceylon Association in London—maintained for the promotion of the sale of the Ceylon product—the tea situation in that colony was reviewed at length by Mr. H. K. Rutherford, who has sent us a copy of his remarks. In spite of the energetic efforts made to promote the sale of Ceylon tea [\$273,234.86 was spent for this purpose in America alone in 1902 by the Ceylon planters] the lower price at which Chinese tea can be bought gives the latter an advantage, even in British markets, without regard to any question of quality. The production of Ceylon tea has increased rapidly, while the prices obtained have declined, and the prospect for extending the consumption does not now seem bright. After referring to these points, Mr. Rutherford said :

While I am on the subject of supply and demand, I would like to bring to your notice another factor, a factor which I do not think has been taken into account, but which I believe will be a most important factor in the near future in the Ceylon tea enterprise. As you are aware, during the last three years the tea proprietors of the low country have been certainly making no profit, if they have not been working at a loss. On that account, as you will remember in the days of coffee, when they turned their attention to cinchona, they are now turning their attention to planting these tea estates with rubber. I was astonished to find it stated in the administrative report of the Kegalla district that no less than 4000 acres of rubber had been interplanted among the tea in that district. That is only one district, and if we consider what is being done in other districts, I would not like to say how much rubber has been planted, but I would not be at all astonished to learn that from 10,000 to 15,000 acres of low country estates have been interplanted with rubber. In the Kelani valley, Kalutara, and minor low country districts there are 60,000 acres of tea, planted in land all more or less suitable for the cultivation of Pará rubber, and producing 25,000,000 pounds of [black] tea. It becomes a question that is worthy of consideration as to what is going to happen, for if we take also into consideration the possibility of green tea being a permanent production, even if it does not increase beyond the 12,000,000 pounds now produced, we are face to face with the fact that if this rubber succeeds better than tea the whole of that 25,000,000 pounds may in time vanish altogether from the black tea output.

Mr. Rutherford was elected president of the Ceylon Association for the ensuing year. He is also a director in The Ceylon Tea Plantations Co., Limited, one of the largest planting enterprises in the colony. The extent of their operations is shown by the fact that they now have invested £248,460 [= \$1,209,129.49] of capital, the amount having been increased several times since 1887, when the amount stood at £75,000. During sixteen years the net profits have aggregated £587,598 5s. 12d. [= \$2,859,548.70], and after paying liberal dividends, and writing off for depreciation, a reserve fund of £100,000 has been accumulated. Part of this has been invested satisfactorily in planting cocoanuts, and now the planting of rubber has been introduced on the estates. These details, by the way are derived from recent annual reports of the company. In addition,

Mr. Rutherford writes to the Editor of THE INDIA RUBBER WORLD :

My company, The Ceylon Tea Plantations Co., Limited, have planted up about 2000 acres of their low country tea estates with Pará rubber. The work was started in 1897 and completed this year. The rubbers are interplanted throughout the tea and thriving well. --- I am also interested personally in the cultivation of rubber in the Klang district [state of Selangor] of the Straits Settlements, and in that quarter of the world the product promises great things.

## BATAVIA COMPANY.

[Plantation "Batavia," near Santo Domingo, in the district of Cuicatlán, state of Oaxaca, Mexico. Office: Wells Building, Milwaukee, Wisconsin.]

INCORPORATED March 12, 1903, under Wisconsin laws. Own 10,000 acres in the region above referred to, about 75 miles southeast of Port Alvorado, on the gulf, and conveniently reached by rail. When acquired by the company there were 400 acres under cultivation, mainly in sugarcane and coffee, with 20,000 rubber trees two and three years old. Six thousand shares have been issued, for each of which when issued, one acre is to be planted and brought to a productive stage, while the shareholders have an interest in the reserve acreage, however that may be utilized or disposed of. These shares are offered at \$300 each, on the instalment plan if desired. The company purpose planting rubber extensively, as well as other crops. The company is composed of substantial business men of Milwaukee and elsewhere. The plantation was purchased from Alfrado Oest, and its development was begun by his brother, Cecilio Oest before the latter became identified with the Isthmus Plantation Co. Ceylon E. Lyman is president; Charles W. Morris, vice president; Vernon T. Wakefield, secretary; H. J. Paine, treasurer. C. M. Kendall, who is general agent, was connected in a similar capacity for some years with the successful Isthmus Plantation Association of Mexico, also established at Milwaukee.

## NEW TOOL FOR TAPPING RUBBER TREES.

A DEVICE for grooving or tapping India-rubber trees is the subject of a United States patent [No. 730,299] granted to Fayette S. Robinson, of Boston. It has been designed for use particularly on plantations of *Castilla elastica*. Briefly described, the device comprises a tongs-like structure having jaws to embrace or partially embrace a tree, and an adjustably supported knife adapted to cut the groove in the tree. When the device is in position, the movement thereof up or down the tree, or around it, causes the knife to cut the proper channel in the bark. The construction of the tool permits the jaws to widen as they are drawn downward, to allow for the increasing diameter of the trunk. A vertical groove may be cut, or a horizontal groove, or a spiral groove around the tree, as desired. While it is supposed that a single grooving knife will be used preferably, the plan of the invention permits additional knives to be inserted. The patent has been assigned to Ferdinand E. Borges, secretary of the Consolidated Ubero Plantations Co. (Boston).

## LA ZACUALPA RUBBER PLANTATION CO.

THE San Francisco journal, *The Mining and Engineering Review*, in answering an inquiry in relation to rubber planting enterprises, quotes from a letter by Mr. O. F. Cook, of the national department of agriculture, who says: "We visited 'La Zacualpa' last year and saw rubber produced from planted trees. A report on the results of our studies is in press." A

representative of the *Review*, that journal further states, visited the offices of G. A. Moore & Co., commission merchants, No. 208 California street, San Francisco, whose books showed that during November and December, 1902, they had received 60 bales of rubber from La Zacualpa Rubber Plantation Co., Tapachula, Mexico, invoiced at \$6000 (Mexican).

#### EXPORTS OF CULTIVATED RUBBER FROM CEYLON.

THE official statement can now be brought down to June 1 last, with the following result:

In 1901.....	7,392 pounds.
In 1902.....	21,168 "
January 1 to June 1, 1903.....	19,461 "

Continued at the same rate, the exports for the current year should reach about 46,000 pounds.

#### GUTTA-PERCHA IN THE PHILIPPINES.

THE report on Gutta percha in the Philippines by Dr. Penoyer L. Sherman, Jr., of the Philippine forestry bureau, summarized in THE INDIA RUBBER WORLD of February 1, 1902 (page 137), is supplemented by some details of interest supplied by him in a later report of the bureau, for the fiscal year 1901-02. He records an expedition in search of Gutta percha trees, with the result of confirming the belief already entertained that a considerable supply of gutta existed in the Philippines, though as yet the most valuable species (*Dichopsis gutta*) has not been recognized. Dr. Sherman explored portions of the large island of Mindanao and the islands and towns of the Sulu archipelago, finding not only Gutta percha trees, but that the Chinese had already built up a much larger trade in the product than is indicated by the customs returns. So well are the natives controlled by these traders that the existence of Gutta percha was denied in many places where Dr. Sherman afterwards found it, and the secrecy of the methods employed is carried to such an extent that when the gutta reaches the Singapore market its source is not known there. The amount of Gutta-percha which paid an export duty to the Philippine authorities during the twelve months ended June 30, 1902, was 373,331 pounds; of the imports at Singapore in 1901, only 14,000 pounds were credited to the Philippines.

In Mindanao Dr. Sherman was surprised at the extent of country over which Gutta-percha exists. The natives say that all of the mountain region of southern Mindanao contains Gutta-percha. Much of the country, of course, has not been explored by Americans, or even by gutta collecting natives, but so far as any one has gone, the trees have been found, and in none of the towns visited by Dr. Sherman on the south coast did he find Chinese or Moros who were not engaged in the Gutta-percha business, shipping the product through Cottabato. Going inland, Dr. Sherman found large Gutta-percha trees, some of which were felled for him by the natives and the *latex* extracted by the usual methods. One tree, 160 feet in height and 8 feet in circumference, yielded 9½ pounds of dry Gutta-percha. Had the tree fallen so that it could have been "ringed" entirely around, and had precautions been taken to catch all the milk which was lost on the ground, Dr. Sherman thinks there would have been 20 pounds, while if all the gutta contained in the bark and leaves could have been secured there would have been 150 to 200 pounds. This is typical of the wastefulness of the native methods in all Gutta-percha districts. In much of this region the trade is controlled by a Moro dattu named Piang, with the aid of a Chinese agent at Cottabato. Piang claims to observe the government regulation against the felling of Gutta-percha trees, but Dr. Sherman found this method practiced by

#### RUBBER PLANTING COMPANY PUBLICATIONS.

THE Isthmus Plantation Association of Mexico, Milwaukee, Wisconsin.—Inspector's Report, 1903.

Indianapolis Ubero Plantation Co., Indianapolis, Indiana.—Fifth Annual Report [by inspector chosen by the stockholders, 1903.]

The Tehuantepec Rubber Culture Co., New York.—[Annual Inspection Report, 1903, by Hon. James E. Southard, a member of Congress from Ohio; letter printed in *fac simile*, on 5 sheets.]

The Obispo Rubber Plantation Co., New York.—Special Report of Lewis A. Amsden, on the company's property "San Silverio el Obispo," in Oaxaca.

Isthmus Rubber Co. of Ubero, New York.—First Annual [Inspection] Report. By Byron W. King, of Pittsburgh. 1903.

Pan-American Planters Co., Chicago.—The Pan American, Vol. I, No. 1, February, 1903.

his men, nevertheless. Similar conditions were also found on some of the smaller islands visited, particularly on Tawi Tawi.

Having made a study of the material, Dr. Sherman declares that a good quality was found by him, but the customs officials, not being judges of Gutta-percha, are forced to accept the valuations made by the Chinese, with the result that the exports yield less than the proper amount of revenue. The natives, it is asserted, are also cheated by the traders, both in regard to the quality of their produce and in the weights.

As a result of Dr. Sherman's report, the secretary of the interior for the Philippines, Dr. Dean C. Worcester, in whose department the forestry bureau is embraced, asserts that "at the present rate of destruction there will be no Gutta-percha trees standing four years hence." He is inclined, therefore, in view of the evident uselessness of ordinary measures for protection of the trees, to recommend the establishment of a government monopoly of Gutta-percha. Exportation, except by the government, could be prohibited, and such prohibition could be made fairly effective. Government buyers could be located at suitable points. The government could well afford to pay a price considerably higher than that now prevailing for the Philippine product, thereby avoiding ill feeling on the part of the gatherers, and by limiting the amount which it purchased could greatly retard the present rapid destruction of the trees. The government buyers would necessarily come in closer contact with the collectors, and something might eventually be done in the way of introducing proper methods of extraction in place of the present destructive processes. At all events, the establishment of suitable extraction plants would make it possible to utilize the large amount of Gutta-percha which is now left in the bark of trees that have been felled and ringed. By the way, Dr. Worcester says that a method has been worked out in the government chemical laboratory for the extraction from the Philippine product of a chemically pure gutta, equal in every way to the best heretofore put upon the Singapore market, the purifying process involving the loss of about 50 per cent. of the original mass.

Dr. Sherman also investigated the question of rubber resources. No rubber was found in Mindanao, but in the Sulu islands he saw an abundance of large rubber vines, or creepers, from which rubber was extracted by cutting them so freely that they soon died. Samples which he secured, he was told at Jolo, would bring at Singapore a price equal to 32 to 40 cents, gold, per pound. It appears that, during 1901-02, in addition to Gutta-percha, there were exports of India-rubber from the Philippines on which duties were paid, amounting to 282,996 pounds.

## THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

By Our Regular Correspondent.

THE numerous firms who in one way or another have found themselves involved in loss owing to this unfortunate affair will naturally not have much of a complimentary nature to say concerning the principal actors. There are, however, those who have not been hit by the failure and who can therefore view the sit-

ECHOES OF THE KRAMRISCH FAILURE.

uation with equanimity, who are ready enough to testify to the benefits which the firm have conferred, though perhaps without set purpose, upon the rubber manufacturer. I think I am correct in saying that the advent of this firm upon the raw rubber market and their eagerness to secure business had a good deal to do with breaking up what was formerly practically a monopoly at Liverpool. With the methods employed by the firm I am not at present concerned; I am merely indicating their sequence. That this has resulted in rubber being sold at lower prices is admitted by manufacturers, and as I have said those who have not been hit by the failure are disposed to testify to the amelioration which the firm effected in the conditions formerly affecting the purchase of raw rubber. There are now four or five times as many rubber merchants than there were twenty-five years ago, and the competition thus induced has naturally been welcomed by the manufacturer.

IT cannot be said that the result of the Irish motor-car race is particularly gratifying to the British, and least of all to the

Dunlop company. Of course the fact that a particular set of racing tires failed to acquit themselves creditably is no proof of general inaptitude in this branch of the rubber manu-

facture, but still it is unfortunate that the occurrence should have given plausible grounds for detractors of the Dunlop company to discourse at large on the inferiority of these tires compared with the Michelin and Continental makes. Just as a success in this race is a wide advertisement of a favorable character, so does a failure act in a like degree, but in the reverse direction. With their experience behind them it is somewhat difficult to understand how the Dunlop company should supply tires so susceptible of punctures as proved to be the case in this race.

THE number of people who have read, though perhaps only casually, a somewhat sensational article in the London *Daily*

*Mail* on root rubber in West Africa, is no doubt greater than of those who have read the earlier comprehensive article on the subject in the May issue of THE INDIA RUBBER WORLD. The subject is undoubtedly of interest, but there does not seem to be any reason at all for the London daily to talk about an impending revolution in the rubber trade. This remark has proved somewhat staggering to a good many readers, to judge by the queries which have been put to me; probably if the writers were questioned it would be found that they could not discriminate between the trade in raw rubber and that of the manufacture. But of course practical people do not as a rule pay much attention to newspaper scientific articles, and probably the one under discussion would not have attracted so much attention if the opinions of Mr. John Holt, of the Liverpool shipping trade, had not found expression therein. I take it that we now know the *sors et origo* of a certain quality of rubber long on the market, about which ignorance formerly prevailed. This is of course

interesting; whether it is important remains to be seen. If the knowledge can be utilized to good effect by those concerned with rubber planting, its importance will be demonstrated, though even supposing that the plant can be cultivated to advantage there does not seem any cogent reason why a revolution of any sort should be apprehended, all the more as no claim is made that the rubber is equal to Pará or even approximate to it. I note that in a letter to *The Engineer* (London) Mr. J. T. Wicks says that seven years ago Messrs. Hecht Frères, the well known rubber merchants of Paris, explained to him the method followed by the natives in gathering the Benguela root rubber, so here we have another proof of the want of novelty in recent announcements concerning this rubber.

WITHOUT attempting anything like an adequate comment on what Dr. Weber has recently said on this subject in a con-

temporary, yet the importance of the matter in-

OXIDATION OF RUBBER. vites a short reference. It certainly seems to have been generally thought that vulcanized rubber was more susceptible to the actinic rays than is raw rubber. His experiments show that this is not the case. In experiments of this sort it is of the first importance that the conditions shall be identical, and the particular condition of the thickness of the test piece is quite the most important. He lays stress upon this, and it is from disregard of this obvious condition that I imagine the discrepancies among previous experimenters are due. At the same time, it should be borne in mind that though thin films of rubber are of the greatest value in determining scientific theories, the figures they yield have but a limited practical value, owing to the fact that in so many applications of rubber the depth or thickness has to be reckoned with as a far more important factor than the superficies. With regard to the effect the mixing rollers have in reducing the resistance to atmospheric oxidation Dr. Weber's figures are quite startling, though not altogether unexpected in their trend. So long ago as 1865 Dr. W. A. Miller found that on exposure to sunlight masticated rubber was much more adversely affected than unmasticated. On the other hand, Mr. W. Thomson, on the result of a single experiment, expressed the view in 1891 that overmastication was not a source of injury to the rubber. As far as I have gone into the matter, Dr. Weber's results are what I should have expected, and it behooves manufacturers to see that rubber is "washed" no more than is absolutely necessary.

THE recently issued Report of the Chief Factory Inspector discloses a rather serious state of things with regard to a branch

of the trade which has not hitherto come in for obloquy, such as has long attached to the

RUBBER WORKS HYGIENE. cold cure process. It appears that lead poisoning is somewhat rife among the girls employed in rubber boot and shoe factories, the source of contagion being litharge in the varnish which is used in making joints. As a rule in rubber works, women and girls do not come in contact with lead compounds, and with regard to the men engaged in the mixing room, precautions are now in general operation to minimize the danger from saturnine poisoning. With regard to the effects of lead on individuals there is plenty of evidence to show how variable is its nature, some people being affected to a much greater extent than others. Idiosyncrasy evidently plays a prominent part, and it would seem highly desirable for factory owners,

when taking on hands, to make efforts to discriminate between applicants for employment. It would not of course be particularly easy to arrive at a correct judgment in the slight data available, but something in this direction might be done in order to minimize as far as possible the risks of trouble and possible prosecution incurred by employing those who are eminently susceptible to lead poisoning.

IT would be very stale news indeed to enlarge upon the difficult times which British cotton spinners are experiencing, and least of all is it necessary to enlarge upon the matter to an American auditory. The facts are well known,

and it is no good enlarging upon them. Where knowledge is not so general, however, is the degree

to which different manufacturers have been hit in existing contracts with *inter alia* rubber manufacturers. One rubber firm told me the other day that they had contracted well ahead for their requirements and were therefore not concerned with the rise in prices. I imagine, however, that there must be many who are not in so fortunate a position, and who must perchance feel the pinch. Of course the recent rise in the selling price of mechanicals had in view the rise in cotton and certain minerals as well as India-rubber, and the extra cost of cotton should not therefore prove a serious stumbling block to trade. Another contingency, however, has to be faced, and that is, with the partial stopping of so many mills, the demand for mechanical rubbers must necessarily decrease.

As far as I can understand the reason why the manufacture of hollow balls by the Cox machine has not proved an entire

success is that for efficient working it is necessary to use a better quality of mixing than in the case of the hand made ball. This naturally puts those who use the machine at a disadvantage in this highly competitive business. There certainly is a saving in labor, but this is more than counterbalanced by the increased cost of the mixing. With regard to lawn tennis balls, the demand is as great as ever, the game as far as clubs and tournaments are concerned, showing none of that falling off which was prognosticated at the resurrection of croquet a year or two ago.

THE recent opening of the Anglo-Belgian telephone cable is an indication of continued progress in submarine telephony.

The distance considerably exceeds that of the

ELECTRICAL Scotland-Ireland and Dover-Calais cables, being

MATTERS. slightly over 47 miles. Transoceanic telephony is still a problem of the future, and it must be confessed that no material progress has been made in recent years in the way of overcoming the deterrent of the electrostatic capacity of the Gutta-percha insulation. There are obvious reasons why the dry core paper cable used in subterranean land lines cannot be employed for deep sea work, great as has been its success in ousting Gutta-percha for land work. Perhaps it may not be superfluous to mention that the electric current used in telephony is a very feeble one—much more so than for telegraphic purposes; a most perfect insulation is therefore required to prevent leakage. Dry air is the best insulator, and if we take this as unity, the figures for the specific inductive capacity of some other bodies in use are: Gutta-percha, 2.46; India-rubber, 2.22; shellac, 2.74; paraffin, 1.99. The problem is to find some substance more closely approaching to unity than do these substances, and this is a field in which there is considerable profit to be reaped by the successful inventor.—With regard to Callendar's compound, which has always had a sort of mystery attaching to it, it is said by Dr. Weber in his book to consist of stearine and pitch heated with sulphur. It was generally supposed to contain ordinary Trinidad bitumen, vulcanized in some way or other. I believe the reference quoted is the

only one in which the veil of mystery has been lifted. In Callendar's cable works the manufacture is kept as dark as possible, the employés generally not being permitted access to the particular department in which it is made.—Recent events in the way of interfering with wireless messages have given fresh hope to those interested in the established cable companies; it seems that the Marconi system as at present developed has decided limitations to its utility.

IT is to be hoped that this firm, which has recently been formed from the *Tubeless Pneumatic Tyre & Capon Heaton, Limited*, so long in liquidation, will again

*CAPON HEATON & CO., LIMITED.* achieve something like the success of its earlier days, when the late Mr. Harry

Heaton, Jr., was the moving spirit. With the reasonable capital of £30,000 it should be able to work its old local connection at Birmingham to advantage, despite the new competition of the Dunlop company.

So numerous have been the failures of attempts to utilize cellulose as a substitute for India-rubber, that it is satisfactory to

A NEW USE FOR CELLULOSE. be able to refer to its entry into certain rubber works with good results, though only as an appendage to the mechanical equipment. I refer to the pulleys made of compressed waterproofed paper, which have recently been put upon the market by Samuel O'Neill & Sons, Limited, Castleton, Manchester, the sole makers in Great Britain. The idea originated in Germany, where the patentee has amply demonstrated the utility of his invention.

GOLFERS are getting somewhat bewildered by the number of special balls which lay claim to their patronage. The Stoughton ball, made by Messrs. D. Moseley & Sons, is one

NEWS IN BRIEF. of the latest. It is one of the rubber variety, Messrs. Moseley having the sole British rights of the American patent.

The fact that the retail price is a trifle less than that of the Haskell and Kempshall balls is a point which is certainly in its favor with a large number of players.—The extensions to the works of the Irwell Rubber Co. (Manchester) are on the point of completion, which is tantamount to saying that the capacity of the works is now largely increased. I understand that very complete arrangements have been made for dealing with the increased business in rubber covered rollers for paper makers, dye works, etc., a branch for which the firm has long been well known.—As some misapprehension seems current with regard to a case of similarity in name it may not be superfluous to state that Mr. Herbert Standing, so well known in connection with the *India Rubber Journal* (London), is quite a distinct personage from the gentleman of the same name who acts as secretary to Messrs. I. Frankenburg, Limited, of Salford.—I saw in process of construction the other day in one of our large works a rubber washing machine of a (to me) quite novel type, and was told on enquiry that it was a type commonly used in America. On a future occasion I hope to speak as to the satisfaction or otherwise given by the machine, which I believe is the first of its kind to be used in Great Britain.—Mr. Thomas Rowley has had a serious attack of illness, but at the time of writing I am glad to be able to report that his condition shows a decided improvement.—I am informed by a firm in the substitute trade that the idea of coloring substitute various tints (as recently referred to in these notes) is not at all a novel one, and that it has been tried in former years with results which were anything but encouraging.

A MEDAL has been conferred by the Société de Géographie Commerciale de Paris upon M. Émile De Wildeman, of Belgium, in recognition of his work, "Les Plantes Tropicales," a review of which appeared in the February issue of this journal.

## THE MERIT OF HEAVY AUTOMOBILE TIRES.

**I**N a recent French work on "The Science of Automobile Touring" the author, M. Leon Auscher, devotes a chapter to the subject of tires, in which appear some suggestions of interest and practical value. The author endorses the declaration of Baudry de Saunier, that without the pneumatic tire, however great the mechanical improvements which have been evolved, we should never have had automobilism as we now know it. He gives credit to Dunlop for the birth of modern cycling, and to the Michelin—the French tire manufacturers—for making the automobile possible.

The first automobile with pneumatic tires made its appearance on the Paris-Bordeaux route in 1895. The tires punctured frequently, but Michelin had demonstrated the possibility of traveling with carriages of this sort, and it only remained to perfect the invention. Two years later a steam carriage built in Dion was rolling at the rate of 60 kilometers [=37½ miles] an hour upon the Marseilles-Nice route. "The automobile rail had been discovered." The perfecting of the tire, however, was a longer process than the invention. Among the difficulties to be overcome, the greatest was in increasing the powers of resistance of the tire. The size progressed from 65 millimeters [=2.60 inches], to 90 mm. [=3.53 in.], and to 120 mm. [=4.72 in.] in diameter. At every stage it was believed that the sufficient limit had been reached. But at every stage experience proved the necessity for making the tire stronger, and that a tire could not have too great powers of resistance. Hence tires have been produced up to 150 mm. [=5.90 in.] in diameter—which figure now holds the record.

Each of these improvements further enabled manufacturers of automobiles to improve their carriages from the double point of view of the reduction of horse power and the general betterment of the mechanism. Thus our motors can confront the better type of roads with the maximum of speed, without making allowance, so to speak, for the resistance of the ground. All of which goes to prove that if the pneumatic tire is not yet perfect, it already realizes many of the *desiderata*, and no longer constitutes a permanent discomfort in the life of the *chauffeur*.

Our author favors the use of wheels of uniform size on motor cars, furnished with uniform tires. One advantage is that the number of reserve tires to be carried on a journey is thus reduced to a minimum. The rear wheels always support a much greater weight than the front wheels—usually three fifths on the rear axle and two fifths on the front. Hence the hinder tires work under a greater strain; furthermore, they are on the motive wheels, which tends to their wearing out much sooner. With four uniform wheels, it is possible to exchange to the front wheels the back tires when they have become worn to the point of being dangerous in the rear, but are still fit for service in the front.

Upon ten carriages, it will be found that nine have tires that are too weak. Manufacturers are apt to overlook the fact that their frame work may carry considerable carriage loads, and thus fail to specify tires of proper strength. Then inexperienced patrons, as a rule, demand too light a weight of frame and accessories. It would be to the interest of tourists to provide themselves with tires stronger than may seem absolutely necessary, especially as carriages almost universally become burdened with unforeseen accessories. What is lost in speed by the use of heavy tires will be regained by avoiding accidents.

The tire of 90 millimeters is capable of supporting a maximum weight of 450 kilograms [=992 pounds] per wheel, or 900 per axle. Now in a carriage weighing 1500 kilos [=3307 pounds], the rear axle carries normally 900 kilos and the front 600. The 90 mm. tire will therefore be inadequate, for it travels continually at its limit of resistance. The wearing out will consequently be rapid, and frequent breaks will occur, while any overload—always possible—will still more endanger the endurance of the tire.

The 120 mm. tire, however, supports 600 kilos [=1323 pounds] per wheel, or 1200 kilos per axle, which affords an excellent margin for protection against accidents. Objections have been urged against tires of such size, because (1) of the additional difficulty, at first, in driving the motor; (2) an additional heaviness of appearance to the eye; and (3) in higher price. But our author has found no difficulty in the management of a motor carrying 120 mm. tires on the front wheels, while as for appearance, he asserts that the eye accustoms itself readily to appreciate a construction the utility of which the brain understands. As for the greater first cost of the larger tires, this is soon offset by the lessened necessity for repairs and replacements. An intermediate tourists' tire is now produced, of 105 mm. [=4.14 inch] diameter, which is capable of sustaining a weight of 150 kilos in excess of the normal strain upon the rear axle of a carriage weighing 1500 kilos.

But it is not enough to secure suitable tires. They require perfect care. Two *chauffeurs*, placed in exactly identical conditions, making use of the same character of tires, will find widely different results in their wear and tear—one outfit of tires averaging two or three times as long as the other. There are three things which a careful driver should avoid—the unnecessary use of brakes, a too great frequency in turning (and particularly in making short turns), and too brisk starts. Not only the tires, but the delicate mechanism of the motor itself, may be injured by brusque, short, turns. And tires must be placed on the wheels with care, and not used without being inflated to the proper degree.

## DETACHABLE VS. SINGLE TUBE MOTOR TIRES.

BY AN AKRON CORRESPONDENT.

A POINT in tire manufacturing on which manufacturers—Akron manufacturers at least—have come unanimously to agree is that the single tube tire is to be almost wholly supplanted by the clincher or detachable. The main reason for this lies in what is asserted to be a fact, that the detachable tire does all that the single tube can do on any vehicle and a great deal more; that it is excelled in no point or manner by the single tube tire; and in addition has extraordinary advantages which the latter does not possess. Chief of these is the "endless chain of economy."

The claim is made, for instance, that with this tire the outer case may be cut and punctured in a score of places, but as long as the inner tube, the air cushion, is not injured, the tire is practically unharmed. And if the inner tube be punctured, it is a simple matter to unfasten the outer case as much as needs be, pull the tube out, patch it, and soon restore everything to working condition. Moreover, if the inner tube be so damaged that it cannot be instantly repaired, a new tube is readily obtainable—the auto tourist carrying two or three with him, no doubt. A new tube can be quickly put in place and there is no expense save for that; the casing remains as before. The injured tube

can be repaired at another time. Still further, if the casing gives out at last, the inner tubes may be in such good condition that only the casings need be renewed—another stroke in economy.

The demand for the detachable or clincher tire—the words are synonymous—has come so far to exceed the demand for the single tube tire that it is said that few if any of the latter will be manufactured another season. The detachable is *the* tire. Improvements may be made upon it, but the right principle of construction has been found and for a long time to come, it is believed, the bettering process will be confined largely to compounding. The solid tire will be steadily improved in the same manner, and in the main there will be but the two styles—solid and detachable pneumatic.

More than ever before is the manufacture of tires—especially automobile tires—being reduced to a truly scientific basis. Where in time gone by pretty much all things were tires that came to the mills of the automobile manufacturers, now tires are being made to fit different machines with scarcely less nicety and precision than milady's tailor displays in fitting her gowns. The exact weight of the vehicle, the distribution of the weight, the requirements which the machine is built to meet—all these and minor considerations are being taken in account. In other days, too, it was not an uncommon thing for the tire manufacturer to discover that the automobile manufacturer or owner had placed the lighter pair of tires upon the drive wheels and the heavy ones in front. They don't do such things anymore, save in rare instances, perhaps.

The demand for tires of all kinds continues, but especially that for automobile and carriage tires is excellent. Even now there is a prospect that next season will discover a still busier situation than this year presented.

A new term is being used by tire manufacturers which may or may not be generally adopted. That remains to be seen. The word is "profile." A tire is described as being of such or such a profile, according as the cross section appears in the blueprint or in the tire itself, revealing the construction and dimension.

[A RUBBER manufacturer in New York, who is largely interested in tire problems, expresses opinions at variance with those contained in the foregoing. He believes that in cases of puncture the inner tubes of detachable tires are quite as likely to be injured as is the inner layer of the single tube tire. Considering the higher first cost of the detachable tires and the cost of replacing inner tubes, the single tube is enough cheaper in the end to offset considerable trouble in repairing the latter. Most of the trouble with single tube tires, he asserts, has been due to the cheap class of goods on the market in the past, for vehicle use as well as for bicycles. With such goods largely eliminated, however, he predicts a return to favor of the single tube, particularly for the lighter vehicles.]

#### A CARRIAGE MAKER ON TIRES.

WRITING in *The Carriage Monthly* (Philadelphia) Mr. C. Fred Kimball, of the important carriage manufacturing firm of C. P. Kimball & Co. (Chicago), says:

"I do not think that in all the years I have been in the carriage business I have ever known of a single invention that might have been of as great value to the manufacturers (meaning in this instance rubber manufacturers) and to the carriage builder as that of rubber tires, and I do not think I have ever seen so valuable an invention so completely lacking in good results to the carriage builder as this same matter of rubber tires.

"Most of the carriage builders have put them on without profit, thereby increasing their volume of business without a

corresponding increase in profit; while the rubber manufacturers have in most cases sold their tires to the carriage user as low, and in many cases lower, than they would sell to the carriage builder.

"This, together with the fact that many carriage builders, seeing that they were deriving no profit from the business, have urged the rubber manufacturer to make cheaper and cheaper grades, has brought about a bad condition of affairs, that is injurious both to the rubber manufacturer and the carriage builder."

Commenting upon a number of letters from the carriage trade published in its last issue *The Carriage Monthly* says: "The drift is evidently in the direction of the very best grade of rubber tires that can be made. The trade has had several years' experience with good, bad, and indifferent tires, and it is able to render a verdict against which it will be dangerous to make an appeal. It will be gratifying to those interests devoting themselves to the production of the best possible work to know that their course is indorsed. They will receive encouragement to continue in their course. Whatever future competition may develop will probably be along the line of quality rather than price."

#### OBSCURE CAUSES OF FACTORY FIRES.

BY JOHN L. KILBON.

EXPERIENCE has taught rubber men, as well as manufacturers of other kinds of goods, that fire insurance companies regard their factories as hazardous risks. True, more money is made by insuring factories against fire than by any other similar line of business; but the risks are perhaps great enough to justify the insurance companies for the policy they pursue.

Certain it is that the list of possibilities of fire is startling in length. If bituminous coal is used, conditions under which it may take fire by the development of heat within the mass are not always easy to avoid. And a mass of bituminous coal on fire in a basement or other place of storage presents a particularly nasty problem to firemen, because the first application of water causes the top of the mass to cake over, preserving the fire indefinitely. Then there is cotton waste. Dry cotton waste is safe enough, but as soon as any animal oil is on it, it must be kept out of the rays of the sun and at a distance from fires. Linseed oil and turpentine, especially when both are present, are also dangerous associates for cotton waste, frequently giving rise to spontaneous combustion. Naphtha and gasoline require little comment, but much care in handling; and the same may be said of lubricating and other oils. Just common looking dust, swept from the floor and left in a corner or dumped in a wooden box, often contains matter that will ignite under the sun's rays, especially if they fall through a glass window in which some small bubble or other flaw serves the purpose of a burning glass.

All the above dangers the rubber manufacturer shares with men in other lines of business, but he has special troubles of his own. Of course, not all the litharge and whiting and lampblack are used in rubber factories, but at least there are factories in other lines where they are not used. The compensations in the rubber man's freedom from the necessity of using certain inflammable things that are used in other manufactures, need not be dwelt upon here. But litharge and whiting and lampblack are all used in practically all rubber factories, and all of them are subject under wrong conditions, to spontaneous combustion. Coal tar also introduces an element of danger. Sulphur needs to be kept with care, though probably not spon-

taneously inflammable. Still another source of danger is found in vulcanized rubber when it is ground up in the process of reclaiming. Care is necessary to prevent the mass from heating to the point of combustion.

The next question is, what to do about it. It is possible, of course, to do nothing but keep your insurance premiums promptly paid and rebuild after every conflagration. But that course is not profitable, nor is it generally necessary. The precautions that may be taken with only slight expense and with a perfectly practicable amount of trouble will generally be successful. While much of what follows may seem very elementary to experienced manufacturers, it is safe to premise that THE INDIA RUBBER WORLD has readers who may find some of the suggestions interesting and profitable.

In general, the protection against spontaneous combustion consists in keeping the inflammable substances dry and cool. Bituminous coal, for instance, should never be kept in a damp cellar nor in bins close to the heat. If large quantities must be stored, they should be given as much area as possible, in order that the depth may not be great. Ventilation must be provided almost as carefully as for employés. If wooden bins or bunkers are used the coal should never be filled in against the sides, as may be done with other kinds of fuel. Generally speaking, no partitions of any kind should be used.

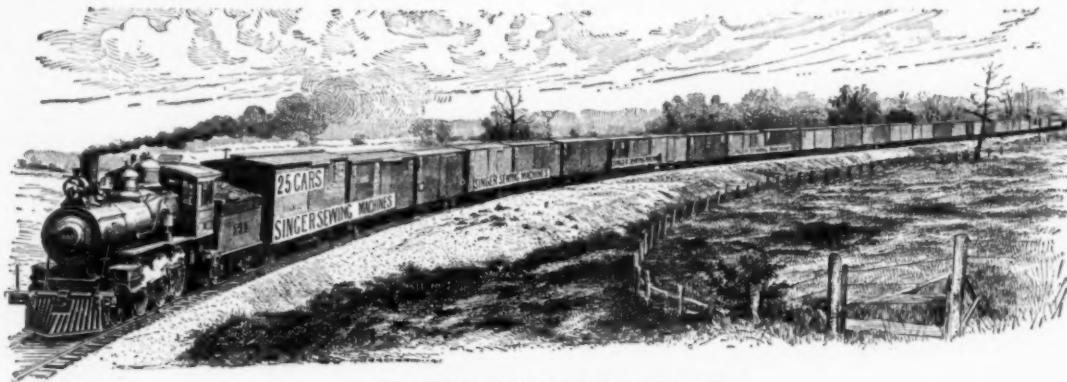
As to naphtha and gasoline, they should be stored apart

#### TRAIN LOADS OF SEWING MACHINES.

THE magnitude of the new Singer plant in South Bend, Indiana, and the output of sewing machines by this great company through its various agencies, are matters of which very few people have much knowledge. The fact that the company now sells 1,500,000 sewing machines annually may seem incredible, but such is the case.

The factory in South Bend, which covers an area of 80½ acres, is the distributing point for the middle west of the United States. Many large shipments have been made since January 1, including two consignments that were unusually large. The first of these shipments was a 25 carload lot, made on April 30. In the cars were 2850 complete machines, packed in crates and assembled ready for use. Their destination was represented in various places in Minnesota, Wisconsin, and Ohio. The train of machines left South Bend over the Lake Shore railroad.

The second similar train load also consisted of 25 cars, loaded with 2552 Singer sewing machines. They were sent to different points in Wisconsin, Illinois, Minnesota, Missouri, Arkansas, Kansas, Colorado, Montana, Iowa, Michigan, Nebraska, and South Dakota. This consignment was shipped May 9. Each car in both trains bore the trade mark sign of the company, which consists of a big S in bright red, standing out con-



A TRAIN LOAD OF SEWING MACHINES.

from the building; and if piped in should be conducted where they will not come in contact with steam pipes or other warm surfaces. The quantity kept on hand should be as small as possible, and the storage tanks must of course be strongly built. If, in addition to such precautions, employés can be dissuaded from smoking while they carry naphtha about or from warming gasoline over a flame, the chances of safety are good.

Metal receptacles and shaded places away from heated pipes are the requirements of the more or less inflammable powders, including dust as well as more useful accumulations of matter. In short, all the precautions against factory fires starting from within, are but amplifications of three maxims: Keep cool; keep clean; keep dry. Without stopping to moralize on other applications of these injunctions, the man who consistently and sensibly applies them to the conduct of a rubber factory, is likely to have little trouble from fire. And what trouble he does have will come from incendiaries or lightning flashes rather than from spontaneous combustion or other internal causes.

THE Rio Michol Rubber Plantation Co. (Berkeley, California), with \$600,000 capital, have filed articles of incorporation in Arizona. Incorporators; L. S. Sherman, W. F. B. Wakefield, L. A. Washburn.

spiciously in front of a woman represented to be working on a Singer machine. The trade mark attracted no little attention as the cars swept through the country and helped to add to South Bend's fame as a busy manufacturing center.

This plant, which is one of the most modern and most complete manufacturing establishments in the world, makes only the cabinet work and the iron stands for the machines. The heads, embracing the mechanisms, are shipped from the factory at Elizabethport, New Jersey. The South Bend factory makes parts for the big plants in other cities, and is one of an extensive system of factories which in themselves are each the largest of their kind in the world. The company has, besides those already mentioned, factories at Kilbowie, near Glasgow, Scotland; in Montreal, Canada; and in Russia. Branch factories are located at Cairo, Illinois, and in Germany.

Singer machines are sold in all parts of the world. More are disposed of in foreign countries than in the United States. A peculiar feature of the sales department of the company lies in the fact that every machine sold is disposed of through one of the company's agencies. No jobber is allowed to handle the machines. Consequently, no matter in what part of the world the machine is bought, it is sold direct to the purchaser by the Singer Sewing Machine Co.

## THE EVOLUTION OF "GALALITH."

THE new material "Galalith," mentioned lately in *THE INDIA RUBBER WORLD* [June 1—page 306] as having been taken up on an important scale by the Vereinigte Gummiwaren-Fabriken, Harburg-Wien, as a substitute for hard rubber or celluloid in the making of certain goods, is the subject of a recent report by the United States consul general at Coburg, Germany—Mr. O. J. D. Hughes. He says that a patent was issued fifteen years ago for the manufacture of buttons, handles, and the like from casein, the principal albumenoid substance of skimmed milk. To fresh casein a metallic salt was added, yielding a firm substance when pressed into molds. But it became brittle, and softened easily in water. To counteract the latter drawback soap was added, but the articles were then both soft and brittle. Then a process was invented to make the casein insoluble by adding formaldehyde, but the product distended in water, and was abandoned.

Recently a new process has been evolved. The first step was to make the casein insoluble by the addition of salts and acids. The product was dephlegmated and dried, when, by the addition of formaldehyde, Galalith was obtained. To produce, for instance, a material similar to ebony, which could be used for handles of table knives, the process was as follows: "Dissolved casein was given a dark color by the addition of soot, and with the help of acetate of lead, a slate colored precipitate was obtained. This was mixed with water and the thin pap filled into a cloth stretched over a frame. The water becoming absorbed by the cloth, the pap contracted into a uniform, firm, and dark mass; this was placed in a solution of formaldehyde and, after being dried, a product resulted which in luster and color was equal to ebony. In this way a raw material is produced which the inventors have protected by numerous patents. An advantage of the new product as compared with celluloid is the fact that it does not ignite so easily and is entirely odorless." Of late trials have been made to produce, by the addition of vegetable oils, an insulating material for electrotechnical purposes.

## A NEW "KERITE" COMPOUND.

WILLIAM R. BRIXLEY, in the specification of United States patent No. 728,851, recently granted to him for an improved vulcanized "Kerite" insulating compound, points out in detail wherein the new material differs from the compound patented under the same name by the late Austin G. Day, to whose business Mr. Brixley succeeded. In this connection, "crude Kerite" is the basic component of a compound which, when it is made complete by the combination with it of India-rubber at a vulcanizing heat, forms the material known as "Kerite." According to Mr. Brixley, although India-rubber is by itself one of the best insulators known, it possesses no durability for electrical purposes, and cannot be used alone. The object of his compound is to utilize the insulating property of the India-rubber, while imparting, by the use of other materials, the necessary permanency and the capacity to resist deteriorating influences.

"Kerite" in its original form included cottonseed oil, which has been omitted by Mr. Brixley, for the reason that "when a crude Kerite which contains cottonseed oil is united with rubber, the presence of this oil in the product impairs and lowers to a very great degree the insulating capacity of the rubber." He now adds talc, not as absolutely necessary to the making of a good compound, but because "its use will be found to give such an increased adhesiveness to the crude material and to render the latter so much better adapted to combine

with the India-rubber to produce the finished Kerite." He does not confine himself to the precise proportions here given for the different ingredients of "crude Kerite," but the patent specification suggests the following

## MIXTURE FOR 180 POUNDS.

Coal tar.....	25 pounds.
Asphalt .....	15 pounds.
Heat together to 350° F. for 1/2 hour; then add—	
Linseed oil.....	70 pounds.
Heat again to 350° F. for 7 hours; let stand over night; heat up to 240° F., and add—	
Sulphur .....	10 pounds.
Heat up to 350° F. in 1/2 hour and add—	
Sulphur.....	4 pounds.
Heat again to 300° F. and add—	
Talc.....	56 pounds.

Keep at same temperature 1/2 to 1/4 hour, when vulcanization will have taken place, and the mixture can be poured into molds or allowed to cool in mass.

Where "Kerite" is intended for the insulation of aerial wires or cables, the proportions of crude compound and rubber to be used are 4 to 1; if for underground conductors, 3 to 2; if for submarine cables, 2 to 3—in the latter case the amount of rubber being larger than of crude Kerite. The crude Kerite is first ground until it comes to a warm homogeneous mass. The rubber is put into the rolls, together with litharge, to aid the subsequent vulcanization of the mass, and oxide of zinc, to render the product more solid and to prevent its oxidation. Mr. Brixley also adds Chicle, the adhesive nature of which assists in the combination of the rubber with the other materials. Next the ground compound and the ground rubber mixture are placed in the rolls together, until all are thoroughly united, after which sulphur is added, but before the vulcanization is performed, and while the mixture is still plastic, it is applied to the electrical wires by means of the usual covering machines. Based upon the specification, the following formula may be stated for a material for insulating overhead wires:

Crude Kerite.....	54 pounds.
India-rubber .....	13 1/2 pounds.
Litharge.....	3 pounds.
Oxide of zinc.....	3 pounds.
Chicle.....	1 1/2 pounds.

Total..... 75 pounds.

Add 5 pounds of sulphur for vulcanization. One other point of difference from Day's "Kerite" is that no sulphide of antimony or other sulphide is used. In connection with Chicle, Mr. Brixley refers to "Columbian gum," which he says may be used as a substitute, since it "costs only about half as much, and answers a better purpose." Previous patents have been issued to Mr. Brixley as follows: No. 714,858, for the manufacture of crude Kerite, and No. 714,859, for Kerite—both dated December 2, 1902. The last of the Kerite patents granted to Mr. Day was dated in 1885.

## UNITED STATES RUBBER GOODS EXPORTS.

OFFICIAL statement of values for the month of May, 1903, and the first eleven months of four fiscal years, beginning July 1:

MONTHS.	BELTING, PACKING, AND HOSE.	BOOTS AND SHOES.	ALL OTHER RUBBER.	TOTAL.
May, 1903 .....	\$ 73,089	\$ 23,938	\$ 194,152	\$ 291,179
July-April.....	680,147	983,044	1,881,773	3,544,904
Total.....	\$753,236	\$1,006,952	\$2,075,925	\$3,836,143
Total, 1901-02...	578,572	981,058	1,607,448	3,167,078
Total, 1900-01...	508,873	684,256	1,584,804	2,777,903
Total, 1899-00...	492,472	373,262	1,258,515	2,123,249

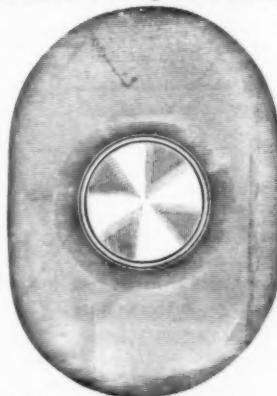
## NEW GOODS AND SPECIALTIES IN RUBBER.

## "AGNOTA" SEAMLESS RUBBER GLOVE.

**T**HIS glove is a distinctively new article of manufacture, the details of production being the subject of a patent [No. 732,360] granted to Clarence A. Lindsay. It is described as a dipped rubber article of strata of different degrees of elasticity, said strata being inseparably adherent throughout.



gloves have been made of a compound and coloring matter, which has the effect of lessening the elasticity and the durability of the glove, while adding in an undesirable degree to the thickness of the glove. The purpose of the present invention is to make a glove of approximately the same weight as a pure rubber article, while giving it body and color to suit, without sacrificing the elastic property or the strength of the glove to any appreciable degree. These goods will be billed to the trade "on approval."—The same manufacturing processes are applicable to other articles, such as ice bags, ice caps, nipples, bathing caps, balloons, and the like—all of which are sold by the same company under their trade mark "Agnota." The second of the accompanying illustrations relates to an ice bag so manufactured. It may be mentioned that these gloves and ice bags have been adopted for use during the current fiscal year by the United States Public Health and Marine Hospital Service. The same process is employed in making a miniature or toy "punching bag," which is having a good sale. Applications for patents have been applied for by Mr. Lindsay in several foreign countries. [The M. Lindsay Rubber Co., New York and Washington.]



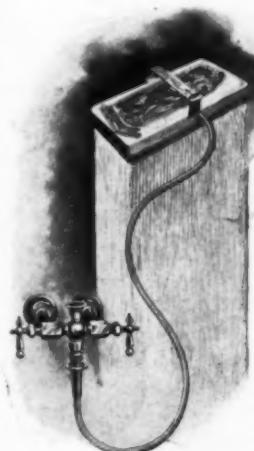
## CORRUGATED RUBBER BOTTLE BRUSH.

IT is constantly recognized by bottlers of beverages of every kind that the utmost care must be taken in keeping the receptacles perfectly pure and sweet. One great obstacle in the past has been the old fashioned bristle brush used to wash out bottles. This brush after being used for a comparatively short time always began to leave its bristles within the bottles, a source of great annoyance both to the bottler and consumer. The Corrugated Rubber Brush here illustrated represents the latest method of cleansing bottles. This brush has the advantage of reaching every part of the bottle, yet with no portion of itself capable of becoming loosened or being dropped. Another feature is that the brush itself can be kept perfectly clean and that

it is exceedingly durable. This corrugated rubber brush is operated on a machine which has a capacity of washing 14,000 bottles per day easily. These bottles are placed over revolving tubes to the ends of which the brushes are attached and strong water pressure is applied while the brushes are revolving. It is specially to be noted that the use of this brush—doing away with devices containing metal parts—never breaks or chips bottles. [Yawman & Erbe Manufacturing Co., Rochester, New York.]

## "KNICKERBOCKER" INDIA-RUBBER FOUNTAIN BRUSH.

THE illustration herewith relates to a rubber bath brush, formed of some 500 rubber ducts, through the tip of each of which a tiny stream of water flows when the brush is connected to a combination hot and cold water faucet by means of a special India-rubber faucet connection. The brush itself is so pliable that a slight pressure of the hand will fit it to any curve of the body. The use of this brush carries the water with it wherever applied, giving a continual fresh clean flow through its hundreds of little tubes, thus avoiding the use of the same water over and over again—a marked advantage over the ordinary tub bath, which retains throughout the bath all soap used and all impurities washed from the body, leaving an unclean deposit in the tub itself to be scrubbed out afterwards. The outfit sold with this brush includes 66 inches of fine white rubber tubing, two nickel plated tube couplings, and one rub-



ber faucet connection with nickel plated mountings; price \$3.50. [Knickerbocker Manufacturing Co., No. 40 Dearborn street, Chicago, Illinois.]

THE GOODRICH RUBBER SPONGE.

THERE have been all sorts of rumors with regard to the successful manufacture of rubber sponges by American manufacturers, and a great variety of samples have been sent to the writer. Few of them, however, have approached even the European sponge. It was to be expected, perhaps, that when The B. F. Goodrich Co. (Akron, Ohio) took up the matter, they would either produce something particularly fine or else would not put a sponge upon the market at all. They now announce the production of a "perfect rubber sponge" and from the samples seen their contention is sustained. The cells are more



even than any we have yet seen and the color is bright and attractive. These may be minor points, but after all they go far to make a perfect article. The cut accompanying this shows their "No. 7" sponge, and it is understood that the manufacturers, having ceased experimenting, are now accumulating a large stock prior to putting them on the market. The new sponge also promises what has heretofore been most difficult—absolute evenness of product, and prompt delivery in any quantity. From a careful examination of several samples seen it would appear that a fine or coarse cell can be produced at will, and either a hard or a soft cure. This being the fact it will be seen that the very finest grades of natural sponges can be equalled if not surpassed.

THE CANTON SEAMLESS HOT WATER BOTTLE.

IN view of the fact that, when trouble does occur in the use of hot water bottles, it is most apt to be traced to the seams, the new article here illustrated is made without seams. It is referred to as being made of rubber of a high quality, vulcanized with extreme care, and the manufacturers show their confidence in it by offering to replace any "Canton" seamless bottle which may prove to be defective in material or workmanship. It is not offered in competition with "bargain counter" goods. It is understood that a very satisfactory patent has been allowed on this bottle, though not yet officially issued. It is made in 2 quart and 3 quart sizes, each bottle in a neat box. [The Canton Rubber Co., Canton, Ohio.]



THE RUBBER "TOM CAT."

THERE are certain games that the boy primitive catches on to by intuition and plays regularly at certain seasons no matter what new ones may allure. They remain ever popular, ever new, because of a certain inherent simplicity and excellence.



Of them are "shinney," "marbles" and "cat." The latter is very old and, like golf, has known no especial change or improvement, until the American inventor began to study it. Then came a change, not in the rules of the game, but in the chief appliance—the "cat." This, according to immemorial usage, was simply a round piece of hard wood sharpened at the ends. It was so simple and so cheap that it seemed beyond improvement. The new "cat," however, with its wooden core, its black rubber cover, and its octagonal body, is sure to win. It will last longer, lie more solidly, fly farther, and is not so fatal to the integrity of window panes. [Gedney & Schaufele, No. 102 Fulton street, New York.]

THE "GRANGER" RUBBER BOOT.

THIS is a new boot, designed particularly for farmers' wear, which suggests the reason for its name. Instead of being lined with a heavy felt, which when it becomes damp from perspiration is hard to dry, this boot has a knit wool lining, which dries more readily and is also warmer. While having as much rubber in it as the old style short boots, it is materially lighter in the leg, because of the difference in the lining. This latter fact is important, since the other advantages of wearing a rubber boot, in many cases are offset by the fatigue caused by their weight. Manufactured by the Beacon Falls Rubber Shoe Co., and handled from their Boston office, Nos. 177-181 Congress street.

JOSEPH FALLEK'S PATENT RING GUARDS.

THERE are people who, for sentimental or other reasons, will not willingly remove their finger rings, even when there is danger of losing them, as for instance in sea bathing. The illustration shows a newly patented safeguard, intended to prevent the loosest ring from slipping off. The contrivance consists of a series of rubber cords, attached

at one end to wrist ring and connecting at the other, by means of clasps, with the rings. The wrist ring may be used to hold the bathhouse or other keys. There is nothing unsightly about the device, and nothing to hinder the free use of the hand, in or out of the water. According to the inventor, "statistics show that 75 per cent. of rings worn in bathing get lost." The Ring Guard retails for 25 cents, and already has come into good demand at the seaside resorts. [Joseph Fallek, No. 47 East Eighth street, New York.]

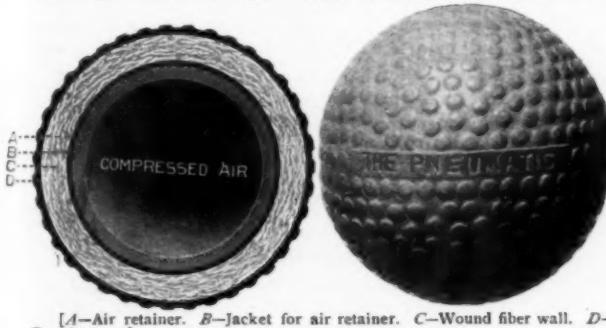
THE CLELAND DAVIS GOLF BALL.

THE INDIA RUBBER WORLD is asked to correct a statement which appeared in its issue for July 1 [page 352], in a description of the "Gyro" golf ball, covered by patents granted to Cleland Davis, U.S.N., to the effect that its construction involves "layers of elastic material, wound on under tension." A specimen ball, which has been shown us, was made by stretching over an inner shell of celluloid a large number of small rubber

bands, applied by means of machinery, and gradually increasing in size with the growth of the core. The number of such bands used in the construction of the specimen ball shown was 306. This construction gives the Davis ball an element of novelty as compared with other rubber cored balls, and it is stated that the method of manufacture is more clearly pointed out in the specifications of another patent now pending. It seems proper to state, however, that the description which THE INDIA RUBBER WORLD is asked to correct was based upon the following paragraph in the original patent [No. 697,816]: "In the form of device shown in Fig. 3 the inner shell *A*, which may be of steel or celluloid, as before, is separated from the outer Gutta-percha shell *B* by a shell *C*, composed of a number of layers of fine rubber stretched on under tension." In another paragraph the inner shell is referred to as being "wrapped around with the rubber strands." We are willing to admit, however, that these expressions do not necessarily imply that the rubber is "wound on under tension."

#### THE PNEUMATIC GOLF BALL.

THIS ball, already referred to in this paper as the invention of Addison T. Saunders, is now being marketed. In size, weight, and appearance it does not differ from other balls, though in construction it consists of a hollow sphere filled only with compressed air, which the inventor has chosen as the best resilient known. The shell of this ball is designed to be practically rigid under the light impact of a putting stroke, but de-



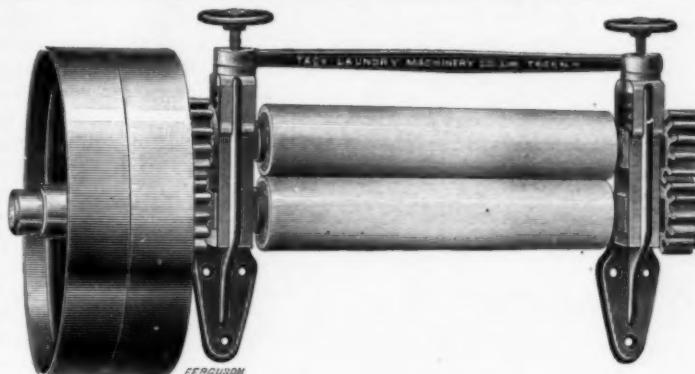
[*A*—Air retainer. *B*—Jacket for air retainer. *C*—Wound fiber wall. *D*—Tough cover.]

pressible under heavier blows, thus bringing into action the resiliency of the compressed air. "The weight giving portion of the Pneumatic ball," it is stated, "lies away from the center; hence a given degree of 'undercut' in a stroke gives the Pneumatic more 'underspin' than it does in a solid ball." By a well known natural law, this rapid rotation holds the ball true to its course and increases its "carry." The method of construction was detailed in THE INDIA RUBBER WORLD, October 1, 1902—page 17. [The Goodyear Tire and Rubber Co., Akron, Ohio.]

#### POWER WRINGERS FOR LAUNDRIES.

THE employment of rubber rollers for laundry purposes is by no means confined to the hand operated clothes wringers with which every one is familiar. Power wringers are made in considerable numbers, for use in the larger laundries, and an illustration herewith shows the mounting of a set of rubber rollers for such a machine, manufactured by the Troy Laundry Machinery Co., Limited (Troy, New York). The machines made by this company are of three sizes, calling for rubber rollers 3½ inches in diameter, and 18 inches, 24 inches, and 30 inches in length, respectively. These power wringers consist

of frames of galvanized iron, with bearings of bronze metal; the pressure is applied through steel springs. The smaller of the three sizes mentioned weighs 200 pounds, and is designed



for 40 revolutions per minute. The rubber rolls are made by the American Wringer Co.

#### "PETITE" ANTI COLIC NIPPLE.

THERE is now being offered on the market, in a special small size, the well known "Anti Colic" nipple manufactured by the Davol Rubber Co. (Providence, Rhode Island). The idea of a small size nipple of this type was suggested by the management of the celebrated Sloane Maternity Hospital, in New York. In that institution not a few incubator babies have to be cared for, and the regular size nipples sometimes were found to be too large. Hence the new article, which has been termed the "Petite" Anti Colic nipple No. 247. The regular size is No. 147. It has proved popular already, not only for the purpose for which originally intended, but for "regular" babies as well. A special feature of construction of these nipples is the "ball top," and another is the three small holes (instead of the usual one hole), which gives a natural flow of milk. These features are protected by patents.



#### BAILEY'S "PETITE" COMPLEXION BRUSH.

THE daintiest article that Bailey has yet turned out is his "Petite" brush made of red rubber about half the size of his regular brush, and put on the market for half the price, which is 25 cents. That the brush is exactly what the trade called for is proved by the great number of rush orders that have been sent in since the first samples were shown. [C. J. Bailey & Co., No. 22 Boylston street, Boston.]

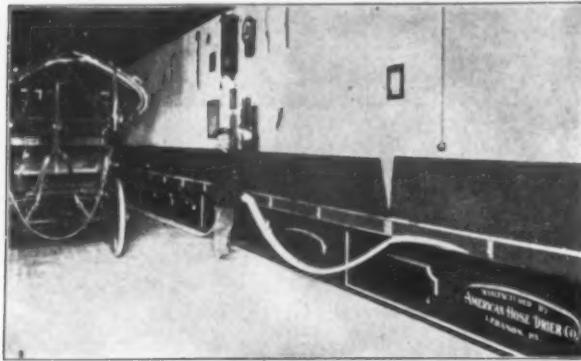
#### THE "SEARCHLIGHT" PACKING.

A NEW white packing that is growing in favor daily is that which has been put on the market under the excellent name "Searchlight." This packing was not marketed until it had been tested exhaustively for a year and a half. It is designed for high pressure steam, for oil and for similar work. It is pure white and beautifully finished. [The Republic Rubber Co., Youngstown, Ohio.]

AT the thirty-first annual meeting (London, July 6) of the Amazon Steam Navigation Co., Limited, the accounts presented showed a favorable condition of business; net profit for the year 1902 of £19,211 19s. 10d., and recommended a final dividend which, added to the distribution six months before, made a total for the year of 4 per cent. The company own 33 steamers, operating on the Amazon and its tributaries, and also hold shares in two ocean steamship companies and in the Manáos Harbour, Limited.

## NEW PATENT FIRE HOSE DRIER.

A SERIOUS problem which confronts fire departments is that of quickly and thoroughly drying hose after use. The covering of cotton hose, absorbing moisture as it does, requires careful attention to prevent mildew and decay. An objection to the hose tower—in which the hose is elevated to the top and suspended on end—is the expense involved, besides which there is a great deal of labor and inconvenience, and the wear and



tear of the hose. Where hose is placed upon racks or supports along the walls of engine houses, there is equal labor involved, besides a disorderly appearance of the walls. In either case much time is required for drying the hose, necessitating a large supply in order that there may always be dry hose available. There has been patented lately a new device—illustrated on this page—which consists of a box 51 feet in length (to accommodate a section of hose, without kink or bend), with a fan or blower attached to a funnel at one end, the blower being propelled by a motor (electric, gasoline, or water), which drives a strong current of air through the box, which, passing over and through the hose, absorbs and evaporates all the moisture in a very short time. The box is 22 inches wide and 25 inches high, and can be placed conveniently along the wall of an engine house. The hose can be taken directly from the reel and placed in the box, and removed when dry and replaced upon the reel, by one man. While in the box there is no strain upon the hose, which rests upon galvanized iron cross bars, which have depressions to prevent the several sections of hose from rolling together or coming in contact with the sides of the box. The size above mentioned will hold twelve sections (600 feet) at a time. [American Hose Drier Co., No. 112 North Eighth street, Lebanon, Pennsylvania.]

## DRYING RUBBER IN VACUO.

THE saving of time in drying materials *in vacuo*, not to mention other advantages, is so marked as to have led to the adoption of this method in a number of different industries. It has been demonstrated that rubber in sheets can be dried *in vacuo* within two hours, at lowest temperature and without oxidation, which latter takes place when rubber is dried in the atmosphere by weeks of exposure. Recent English writers, while acknowledging the injurious consequences of the old method of atmospheric drying, have found fault with the system of drying *in vacuo*. To this criticism the reply has been made that any failure has been due, not to the system itself, but to the improper handling of the apparatus, as the formation of a watertight film on the surface of the rubber after the surface moisture has evaporated can be avoided, instead of preventing the evaporation of the moisture from the interior.

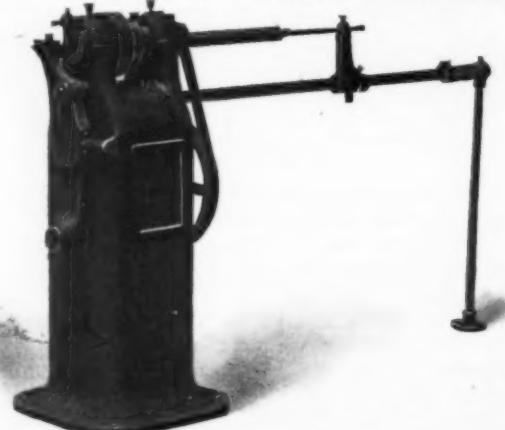
## POWER PUNCH FOR RUBBER NIPPLES.

THE problem of punching a hole in a rubber nipple would not seem at first one of much moment, as it could be very easily accomplished by a hollow needle on a standard and a mallet in the hands of a nimble fingered girl. When, however, it comes to punching a thousand gross of them, and it is figured that the ordinary rate of pay is 40 cents a hundred for punching, it is really worth consideration. The illustration shows a power machine that is very simple and that successfully and rapidly punches all sorts of nipples, even those made of pure gum. The machine as shown has a hollow die over which is hung a needle with an eight inch clearance between needle and die. The standard on which the needle is hung is attached to a thimble which revolves easily on a bolt attached to the revolving disc and when run up to speed the punch works noiselessly and with perfect accuracy. There is also a special arrangement in connection with the needle and die not shown in the illustration which goes far toward making the aperture in the rubber perfect. [Excelsior Machine Works, Akron, Ohio.]



## THE ADAMSON DISC CUTTER.

THE old time manner of cutting discs or rings was by the combination of a boy, a knife, and a lathe. The boy was apt to be slow, and even if he did his best it was almost impossible for him to cut a number of discs of exactly the same thickness. The next step in advance was, therefore, a machine capable of cutting rapidly, accurately, and automatically.



Quite a variety of such machines were designed and are to-day in use, some of them being but a slight advance over the old fashioned method. The machine shown in the accompanying illustration is designed to be the best for the purpose that can be made. It is capable of handling both hard and soft rubber discs of standard sizes and makes a perfectly clean cut, averaging 60 to 100 per minute, depending, of course, on the thickness of the stock. As will be seen, the machine is exceedingly simple in construction, easily operated; is automatic throughout and does the work with a surprisingly small amount of waste. [A. Adamson, Akron, Ohio.]



THREE OF THE FIVE TALLYHOS IN LINE.



ON THE PUTTING GREEN.

## OUTING OF THE NEW ENGLAND RUBBER CLUB.

THE Midsummer Outing of the New England Rubber Club, on July 14, occurred this year about two weeks earlier than usual, as it was believed that more of the members would be at home early in July than later in the month or early in August. Through the good offices of Mr. Arthur W. Stedman and Mr. F. C. Hood, the association became for the second time the guests of the Country Club at Brookline, Massachusetts. The choice was most enthusiastically approved by the majority of the rubber men, who appreciate fully what this magnificently equipped club offers in the way of beautiful surroundings, opportunities for athletic sports of all kinds, and a great hospitable mansion equipped with all creature comforts for a rallying place.

The feature of the day was the tallyho ride from the Hotel Touraine, in Boston, out Commonwealth avenue, through the beautiful park system comprising the Back Bay Fens, Jamaica-way, through the residence section of beautiful Brookline to the Country Club. There were five tallyhos in line, Mr. Wil-

liam J. Kelley, who suggested this feature, being in charge. On reaching their destination the visitors were greeted by the Lynn Cadet Band, which, from the broad verandas, discoursed popular music through the afternoon and evening.

The golf links, which are particularly fine, were at once put in use for the Handicap Medal Play Tournament. There were many entries, but on account of the rain, which came later, only the following made the full course of eighteen holes:

## CLASS A.

	Hand-	Gross.	icap.	Net.
H. C. Mason....	88	10	78	
F. C. Hood.....	92	0	92	
A. Johnson.....	93	0	93	
John Abbott....	96	12	84	
F. D. Balderston..	98	10	88	
C. M. Brett.....	100	6	94	
A. H. Brown....	100	10	90	
W. E. Barker....	100	10	90	
W. I. Swasey....	107	10	97	
Frank Dane.....	126	12	114	

## CLASS B.

	Hand-	Gross.	icap.	Net.
E. H. Litch.....	103	2	101	
Wm. Keyes.....	104	6	98	
A. L. Lindsey....	107	4	103	
E. E. Wadbrook...	120	6	114	
J. E. Page.....	129	4	125	
W. J. Kelley.....	134	6	128	



SNAP SHOT AT A GROUP OF OFFICERS.

[Secretary PEARSON, Assistant Secretary WADBROOK, President APSLEY, Treasurer WHITMORE.]



THE BASEBALL GAME.

[Showing the Catcher of the "Rubbers," Umpire Apsley, and a group of admirers.]

Although the rain drove most of the visitors, even the golfers, indoors at the first breaking of the clouds, the base ball game between the "Rubbers" and the "Rubouts" was immediately started. The two nines were made up as follows:

RUBBERS.	RUBOUTS.
Hood, ab.	Payne, ab.
Robinson, c.	Kelley, c.
Barker, p.	Balderton, p.
Pearson, tb.	Greene, tb.
Abbott, jb.	Palmer, jb.
Paige, s.s.	Phipps, s.s.
Capen, l.f.	Brown, l.f.
Mayo, r.f.	Higgins, r.f.
Allen, c.f.	Wood, c.f.

The Hon. L. D. Apsley, the president of the Club, was chosen as umpire and his rulings were among the most interesting features of the game. The playing of E. B. Pearson at first base, William J. Kelley's catching, and W. E. Barker's pitching also received special encomium. Very early in the game the rain began again, and at last with reluctance both spectators and players were driven to cover. According to the official score the game stood: Rubbers, 7; Rubouts, 1.

The remainder of the afternoon was spent in social converse, in playing pool and pingpong and in absorbing the fine music. At 7 o'clock all were assembled in the banquet hall and facing the beautifully decorated tables. The dinner was most excellent.

MENU	
Little Neck Clams	
Cream of Chicken a la Berg	
Salmon a la Bellevue	
Julienne Potatoes	Cucumbers
Sweetbreads Glacé à la Dumas	
Roast Filet of Beef, au Madaire	
Bermuda Potatoes	Green Peas
Punch	
Broiled Squab Chicken	
Salad	
Ice Cream and Cake	
Cheese	Crackers
Coffee	

During and between the courses the musically inclined in the Club sang popular songs oftentimes very successfully. During a hiatus in the singing President Apsley made a brief speech which he pointed with a story in a rich Hibernian brogue that delighted all hearers.

After the coffee W. E. Barker, as chairman of the sports committee, announced the prize winners, speaking very happily and drawing pleasant acknowledgments from those fortunate enough to be thus rewarded. The winners and prizes follow, the scores being found in the lines above.

#### CLASS A.

H. C. Mason, best gross, cup.  
John Abbott, best net, cup.  
F. C. Hood, Second best gross, one dozen "Wizard" balls.  
F. D. Balderton, second best net, one dozen "Haskell" balls.

#### CLASS B.

E. H. Litch, best gross, cup.  
William Keyes, best net, cup.  
A. L. Lindsey, second best gross, one dozen Saunders pneumatic balls.  
E. E. Wadbrook, second best net, one dozen "Stoughton" balls.

The only other prize given was for tennis which was won by Harold French.

After the prize giving there were brief speeches by ex Governor Bourn and others, after which, led by E. E. Wadbrook who is the possessor of a fine baritone voice, all present made the rafters ring with "America" and parted in high good humor.

#### RECENT RUBBER PATENTS.

##### THE UNITED STATES PATENT RECORD.

ISSUED JUNE 2, 1903.

N O. 729,534. Compression-coupling. Martin P. Boss, San Francisco, California.  
729,535. Foot support for bootblacks' stands [with rubber pad]. Frank Hodes, New York city.  
729,639. Baseball bat [with filling of rubber]. John F. McCoy, New Orleans, Louisiana.  
729,699. Marking stamp. Frank Test, Philadelphia, Pennsylvania.  
729,704. Wheel tire. Andrew D. VanAusdall, Oxford, Ohio.  
729,923. Rubber mat. William J. Ellis, Akron, Ohio.  
729,941. Hoof pad. William J. Kent, Brooklyn, New York, assignor to Revere Rubber Co.  
730,054. Syringe. John H. Sheets, New York city.  
730,073. Vehicle wheel. John M. Alderfer, Sharon Center, Ohio.  
730,117. Fountain pen. Robert A. Hamilton, Brooklyn, New York.  
730,126. Process of manufacturing composition for golf balls [Gutta-percha and Balata.] Robert Hutchinson, Prestwick, Scotland.  
730,127. Golf ball. Robert Hutchinson, Prestwick, Scotland.  
730,145. Safety tread for stairs. James A. McNamee, Cambridgeport, Massachusetts.  
730,171. Pouch. John A. Smithline, Burlington, Iowa.  
*Trade Mark.*

40,469. Elastic or cushion heels and soles for boots and shoes. Frank W. Whitcher, Boston, Massachusetts. *Essential feature*—The word "Waukon." Used since January 1, 1898.

ISSUED JUNE 9, 1903.

730,299. Device for grooving or tapping rubber or other sap yielding trees. Fayette S. Robinson, Boston, assignor to Ferdinand E. Borges, Brookline, Massachusetts.  
730,303. Golf ball. Alonzo D. Seaman, Milwaukee, Wisconsin.  
730,471. Glove. Francis McConnell, Chicago, Illinois.  
730,474. Pneumatic tire. Edwin B. Rayner, Piqua, Ohio.  
730,596. Syringe. Francis M. Baker, Fond du Lac, Wisconsin.  
730,625. Vehicle wheel. William Esty, Laconia, New Hampshire.  
730,638. Wheel tire. Daniel E. Griffiths, assignor to James B. Corey, both of Pittsburgh, Pennsylvania.  
730,720. Expandible piston. Edward Thomas, Fulton, Kentucky.  
730,783. Fountain pen. Oliver A. Morrow, Whitehall, Illinois.  
730,822. Rectal syringe. Henry M. Guild, Erie, Pennsylvania, assignor to Tyrrell's Hygienic Institute, New York city.  
*Trade Mark.*

40,575. Rubber horseshoes. Calumet Tire Rubber Co., Chicago, Illinois. *Essential feature*—The representation in profile of the head of an American Indian bearing a full head-gear of feathers and strips of fur and showing a shield and spear projecting from behind and forward of the face of the Indian. Used since July, 1901.

ISSUED JULY 16, 1903.

730,855. Horseshoe attachment. Everett L. Abbott, New York city.  
730,959. Ball. Kenyon V. Painter, Cleveland, Ohio.  
731,026. Playing ball. Charles B. Elliott, Riverside, Connecticut.  
731,049. Clothes wringer. Dickson Hall, Meadville, Pennsylvania.  
731,058. Life belt. Friedrich W. Kern, Antwerp, Belgium.  
731,154. Playing ball. Alson E. Barnhart, Chicago, Illinois.  
731,165. Foot ball. Albert Crossley, New Bedford, Massachusetts.  
731,201. Supporting bandage. Lee R. Miller and Emanuel T. Richter, Akron, Ohio.  
731,312. Hose coupling. Edgar J. Pace, Salem, Ohio, assignor of one-half to William G. Hard and Dora J. Hard, Salem, Ohio.  
731,314. Pneumatic life belt. John A. Malmqvist, Campello, Massachusetts.  
731,348. Hose coupling for pneumatic tires. Charles G. Eshelman, assignor of one half to Edwin S. Youse, both of Reading, Pennsylvania.  
731,554. Collapsible vessel for atmospheric motors. Weston M. Fulton, Knoxville, Tennessee.  
731,379. Pipe or hose coupling. Cary W. Martin, New York city.  
731,406. Ball. Kenyon V. Painter, Cleveland, Ohio.  
731,414. Horseshoe pad. Robert P. McDougall, Yonkers, New York.

ISSUED JUNE 23, 1903.

731,529. Hose nozzle. Everett H. White, assignor to Eaton, Coe & Burnham Co., both of Bridgeport, Connecticut.

731,614. Golf ball [comprising a non-responsive center consisting of strand rubber and gum, a hard rubber shell, and an outer covering of Gutta-percha]. Robert Reach and George B. Staples, Philadelphia.

731,616. Horseshoe [with rubber pad fitted to a channel on the tread side]. John Regan, New York city.

731,674. Dental plate and process of making same. Harry L. Finnell, Peoria, Illinois.

731,677. Rubber tire [solid, for vehicle wheels]. Christian Grote, Akron, Ohio.

731,709. Truss [the pad comprising an outer casing of yielding material, and an inner pneumatic bag, with inflating nozzle]. John Railton, Cheboygan, assignor to Ignatz Mayer, Detroit, Michigan.

731,821. Golf ball [having a center composed of vulcanized rubber combined with feathers, and a Gutta-percha shell]. Charles T. Thompson, Philadelphia.

ISSUED JUNE 30, 1903.

732,117. Fountain pen. Albert E. Schaaf, Toledo, Ohio.

732,199. Vehicle wheel tire. [An outer or supplemental steel tire, or rim, between which and the inner tire a series of rubber blocks is placed.] Samuel C. Lines, Curtice, Ohio.

732,209. Hose coupling. John P. Muehlebach, Kansas City, Missouri.

732,236. Hand stamp [comprising a head and a handle constructed of rubber and formed integral]. Eugene M. Tilden, Washington, D. C.

732,237. Rubber tire [provided in its base portion with grooves adapted to enclose T-heads of bolts projecting from the metallic tire and to seat on said metallic tire; longitudinal wires embedded in said rubber tire; and transverse wires likewise embedded]. Edward B. Tragler, Akron, Ohio.

732,278. Noiseless tire protector [involving a narrow annular leather band, to form the tread, and canvas strips to hold it in position]. Lincoln C. Cummings, Pasadena, California.

732,360. Seamless rubber glove. [Described on another page of this Journal.] Clarence A. Lindsay, New York city.

732,361. Hernia truss [with inflatable pad]. Heinrich Loewy, Berlin, Germany.

732,407. Hose coupling. William R. Amos, Saxton, Pennsylvania.

732,532. Ring guard. [Described on another page of this Journal]. Joseph Fallek, New York city.

732,583. Ball [comprising an inner core, a sphere of crude rubber retained under compression, and an outer shell of Gutta-percha]. Kenyon V. Painter, Cleveland, Ohio.

732,609. Protector and snow excluder for felt boots and overshoes therefor. Samuel W. Wehn and Charles W. Oler, Everett, Pennsylvania.

732,658. Rubber eraser. Frederick A. Schultz, Hasbrouck Heights, New Jersey, assignor to Mattson Rubber Co.

*Design Patent.*

36,397. Water bag. Edward E. Menges, New Haven, Connecticut, assignor to Seamless Rubber Co.

[NOTE.—Printed copies of specifications of United States patents may be ordered from THE INDIA RUBBER WORLD OFFICES at 10 cents each, postpaid.]

## THE BRITISH PATENT RECORD.

[\* Denotes Applications from the United States.]

## APPLICATIONS—1903.

8,526. J. M. Leigh, Manchester. Tire for road vehicles. April 15.

8,520. E. B. Killen, Belfast. Pneumatic tire. April 15.

8,558. T. Houben, 33, Cannon street, London. Pneumatic tire for motors. April 15.

8,578. F. J. Webster, Mitcham, Surrey. Pneumatic tire. April 15.

\*8,583. V. F. Feeny, 60, Victoria street, London. Toy balloon. (The Rubber Balloon Co. of America, New York.) April 15.

8,829. P. F. Woods, 18, Southampton buildings, London. Manufacture of golf balls. April 18.

9,228. G. Abati, Southampton buildings, London. Pneumatic tire. April 23.

9,225. J. Woodall, Bloomsbury, London. Inner tube for tires. April 23.

9,234. C. T. Kingsett, 24, Southampton buildings, London. Golf ball. April 23.

9,280. B. Astin, Manchester. Wringing machine. April 24.

9,282. W. Findlay, Glasgow. Pneumatic tire. April 24.

9,331. C. E. Bontwood and G. Browning, 18, Buckingham street, London. Golf ball. April 24.

9,358. C. R. Crombie, Victoria India Rubber Mills, Edinburgh. Process for repairing vulcanized rubber articles. April 25.

9,373. W. D. Sainsbury, Glasgow. Skid preventing device for rubber tires. April 25.

9,468. C. H. Wilkinson, 33, Chancery lane, London. Pneumatic tire. April 27.

9,506. L. C. Baker, Southampton buildings, London. Protector for pneumatic tires. April 27.

9,529. R. G. Hyndman-Caie, Liverpool. Elastic tire for vehicles. April 28.

9,733. J. T. Day, Finsbury, London. Protector for rubber tires. April 29.

9,864. E. O. Squires, St. Blazey, Cornwall. Zonnar non-slipping tire, pneumatic or solid. May 1.

9,882. J. Millar, Dundee. Linoleum composition. May 1.

9,891. G. E. Wells and The British Xylonite Co., Limited, London. Playing ball. May 1.

9,914. George Banhan & Co., Limited, and C. K. Sagar, Manchester. Impregnation of belts with Gutta-percha, Balata, and the like. May 2.

9,952. J. Muskett, Manchester. Means of securing pneumatic tires to rims. May 2.

9,960. S. Wood and Charles Macintosh & Co., Limited, Manchester. Suction hose. May 2.

10,059. L. Johnstone, Southampton buildings, London. Pneumatic tire and apparatus for the manufacture of the same. May 4.

10,076. T. S. Rose and T. N. Harwood, Uxbridge. Detachable pneumatic tire. May 4.

10,092. E. Giersberg, 60, Queen Victoria street, London. Hose coupling. May 4.

10,247. A. A. Wade, Leeds. Improvements in tires and tire repairing. May 6.

10,284. W. W. Tambs, Birmingham. Resilient tire. May 6.

10,292. E. Martin, Stoke Newington, London. Solid rubber tire. May 6.

10,300. A. C. Rampton, Kingston-on-Thames. Method of protecting pneumatic tires. May 6.

10,343. C. A. Burghardt, Alderley Edge, Cheshire. Joining of India-rubber or Gutta-percha to leather. May 7.

10,422. F. W. Stephens, 322, High Holborn, London. Hose coupling. May 7.

10,439. T. Burgum, Canning Town, London. Elastic stocking. May 8.

10,510. L. M. Keizer, Southampton buildings, London. Rubber rings for bottle seals. May 8.

10,554. E. O. Mawson, West Ealing, London. Protection of tires for punctures. May 9.

10,636. R. Hutchison and R. F. Hutchison, Glasgow. Golf ball. May 11.

10,804. R. K. Evans, 70, Chancery lane, London. Pneumatic tire. May 12.

10,826. J. Coomber and others, Liverpool. Cushion tire. May 12.

10,888. J. Cockburn, Glasgow. Pneumatic tire for motors. May 13.

10,934. W. F. Williams, 53, Chancery lane, London. Elastic tire. May 13.

10,941. Christian H. Gray (India-rubber, Gutta-Percha and Telegraph Works Co., Limited) and T. Sloper, London. Improvements relating to rubberized cords. May 13.

10,943. Christian H. Gray and T. Sloper, London. Pneumatic tire. May 13.

10,968. A. E. Aldworth and T. A. Gooch, Kensal Rise, London. Tire for cycles and motors. May 14.

11,006. E. Ferry and J. T. E. Jones, Paddington, London. Cover for pneumatic tires for vehicles. May 14.

11,130. J. R. Rickard, Brentford. Supported pneumatic tire. May 15.

11,171. G. W. Dawes, Manchester. Golf ball. May 16.

11,206. A. G. Ryder and J. C. Wilmott, 322, High Holborn, London. May 16.

11,197. B. Hopkinson, Kensal rise, London. Rubber heel for boots. May 16.

11,294. C. E. R. Keddie, 62, Tulse Hill, London. Non-skidding tire for motors or cycles. May 18.

11,327. W. R. Marchant, and W. H. Chapman, Regent's park, London. Detachable metal flange for wheels having rubber tires. May 19.

11,329. W. Marchant, London. Twin tubes in pneumatic tires. May 19.

11,338. T. H. Slack, Alderley Edge, Cheshire. Detachable rubber heel for boots. May 19.

11,345. W. Scott, St. Judes, Plymouth. Non-puncturing tire. May 19.

11,355. J. C. Robins, Edinburgh. Puncture closer for pneumatic tires. May 19.

11,480. M. Baerlin, Manchester. Outer cover for pneumatic tires. May 20.

11,516. E. E. Bailey, 60, Queen Victoria street, London. Golf ball. May 20.

11,520. L. E. Sacha, Southampton buildings, London. Rubber tire for vehicles. May 20.

\*11,656. F. H. Richards, 19, Holborn viaduct, London. Golf ball. May 21.

\*11,657. F. H. Richards, 19, Holborn viaduct, London. Playing ball. May 21.

11,651. Christian H. Gray and T. Sloper, London. Improvements relating to rubbered threads or fabrics. May 21.

11,674. J. Mitchell, Manchester. Inner tubes of pneumatic tires and other tubing. May 22.

11,785. M. McDaid, Glasgow. Machinery for winding rubber tape on the cores of golf balls. May 23.

11,803. R. W. Attwater, Preston. Rubbered covered roller for printing fabrics. May 23.

11,849. C. W. Neville, Bedminster, Bristol. Rubber valve for tapping casks. May 25.

11,853. J. M. Heyman, Newcastle-on-Tyne. Method of inserting tires and other pneumatic articles with compressed air. May 25.

11,857. C. E. Theodosius, Maidenhead. The triple pneumatic tire. May 25.

11,988. A. Lafargue, and Steam Generators, Limited, 111, Hatton garden, London. Resilient tires for vehicles. May 26.

11,991. V. Pappenheim, 111, Hatton garden, London. Syringe. May 26.

12,029. J. Orrell, Liverpool. Pneumatic tire. May 26.

12,059. P. A. Martin, Birmingham. Golf ball and method of manufacture of the same. May 27.

12,066. C. D. Douglas, Glasgow. Rubber protector for boots. May 27.

12,179. C. E. Vaughan, 57, Chancery lane, London. Golf ball. May 28.

12,181. W. Borchers, Strand, London. Elastic vehicle wheel. May 28.

12,263. J. K. Willis, 139, Queen Victoria street, London. Golf ball. May 29.

12,305. A. Brown, 111, Hatton garden, London. Tire protector for vehicle wheels. May 29.

## PATENTS GRANTED.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MAY 6, 1903.]

945 (1902). Detachable pneumatic tire [with means for protecting the air tubes]. A. J. I. Rath, Anerley, Surrey.

1,243 (1902). Solid rubber tire [fastened by pins passing through transverse holes in the tire and rim flange]. J. Shepherd, Davenport, Cheshire.

1,377 (1902). Rotary rubber heel pads for boots. D. A. Beyrer, Northampton.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MAY 13, 1903.]

\*1626 (1902). Rubber horseshoes [with metal plates imbedded]. J. Hirsch, Kansas City, Missouri.

\*1,643 (1902). Rubber vehicle tire [with soft rubber core]. Mrs. Mary E. Brooke, Denver, Colorado.

\*1671 (1902). Hot water bag [with means of securing to the person]. H. H. Lake, Southampton buildings, London. (M. S. Williams, Boston, Massachusetts.)

1,714 (1902). Hose nozzle [with device for controlling the flow]. H. W. Pearson, Bristol.

1,809 (1902). Golf ball [Gutta-percha rod, softened in hot water, is formed by hand into a ball, which when sprinkled over with sulphur is rolled on a hot plate, so as to impregnate the outer part with the sulphur, thus producing a hard surface; the ball is finished in a mold in the usual way]. J. P. Cochrane, Edinburgh.

1,978 (1902). Rubber pad for leather legging [to prevent injury to the boot]. E. A. Fisher, Newport, Monmouthshire.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MAY 26, 1903.]

2,232 (1902). Rubber heels for boots. E. A. Clapp, 10, Huxley street, Queen's court, London.

2,295 (1902). Pneumatic tire [with means for protecting the air tube]. E. Smith, Barnham Dean, Berkshire.

\*2,302 (1902). Method of manufacture of golf balls. E. Kempshall, Boston, Massachusetts.

\*2,383 (1902). Solid rubber tire for vehicles [with lateral ribs which engage under the inturned edges of the rim]. F. A. Seiberling, Akron, Ohio.

2,471 (1902). Pneumatic wheel [having an inflated tube interposed between the tire member and the hub member]. R. Harrison, Sligo, Ireland.

[ABSTRACTED IN THE OFFICIAL JOURNAL, MAY 27, 1903.]

2,562 (1902). Elastic tire [composed of a series of small metal springs within a rubber cover]. A. N. Ferguson, Sainte Cunegonde, Quebec.

2,577 (1902). Pneumatic tire valve. A. de Gingins, Chateau de Gingins (Vaud), Switzerland.

2,637 (1902). Hoof pad. J. Caws, Kersal, near Manchester.

2,729 (1902). Non-slipping pads for horseshoes. D. Thomas, Montague square, London.

\*2,741 (1902). Pneumatic tire. J. F. Lober, Pittsburgh, Pennsylvania.

## THE GERMAN PATENT RECORD.

## PATENTS GRANTED.

143,898 (Class 70d). Music leaf turner in form of finger stall. J. Sieghold, Bremerhaven. June 24.

## DESIGN PATENTS [GEBRAUCHSMUSTER].

199,840 (Class 64c). Shipping and storage bung with perforated rubber disk over the bunghole, adapted for fermentative liquids, to prevent escape of the liquid without hindering the escape of gases. Frau C. Schniewindt, Neuenrade. June 4.

199,639 (Cl. 70d). Finger stall, with V shaped cut in front, forming two tongues. J. Andersen, Christiania. June 4.

199,841 (Cl. 71a). Shoe vamp or boot upper of rubber combined with some textile material. M. Urbahn, Hirschgraben. June 4.

199,842 (Cl. 71a). Shoe vamp of rubber combined with leather. M. Urbahn, Hirschgraben. June 4.

200,106 (Cl. 3a). Corset having body supports united by rubber inserts. G. Schmid, Coburg. June 10.

200,356 (Cl. 30d). Abdominal bandage having rubber inserts on one side and press button closures on the other, and rubber band for increasing the width. Emily Billeb, Hannover. June 10.

199,835 (Cl. 45f). Horseshoe with tightly fitting unperforated rubber bridge. H. Brohm, Mannheim. June 10.

200,677 (Cl. 17d). Cooling apparatus, having a woven hose coated with rubber. Frau Trapp, Kaiserslautern, Pfalz. June 17.

200,899 (Cl. 20d). Automatic fender for street cars [connecting with the pavement by means of a feathering rubber band. Strassen-Eisenbahn Gesellschaft in Hamburg. June 17.

200,909 (Cl. 47f). Appliance for caulking socket pipes, consisting of a rubber ring. H. Beinhauer, Bielefeld. June 17.

201,009 (Cl. 47f). Appliance for caulking socket pipes consisting of a rubber ring. H. Beinhauer, Bielefeld. June 17.

201,057 (Cl. 47f). Metal tubing with rubber shield on places exposed to wear. Dr. Heinrich Traun u. Söhne, Hamburg. June 17.

201,058 (Cl. 47f). Metal tubing with removable rubber protection inside. Dr. H. Traun u. Söhne, Hamburg. June 17.

201,515 (Cl. 3a). Rubber hose supporter with clasp and moveable slides. C. E. Schurig, Grossrohrsdorf. June 24.

## APPLICATIONS.

19,047 (Cl. 63c). Hollow rubber tire containing solid core. W. F. Williams, London, England. June 10.

32,546 (Cl. 71a). Rubber shoe. C. P. Bohnke, Riga, Russia. June 10.

THE more one reads the South American newspapers, the less clear becomes the situation respecting the Acre, in dispute between Brazil and Bolivia. The United States minister to Brazil, however, reports to his government the extension until October 21 of the period for negotiating arrangements between the disputants for a settlement of the trouble.

## THE RUBBER TRADE IN AKRON.

BY A RESIDENT CORRESPONDENT.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Judge A. R. Webber, in the common pleas court at Akron, on June 27, rendered a decision overruling the demurrer of the Diamond Rubber Co. to the suit for \$1995 damages brought against them by Peter Kiefer, a former employé, on February 10 last. [Details in THE INDIA RUBBER WORLD, March 1—page 210]. Kiefer averred that he had been discharged, after seven years employment by the company, without any reason being given therefor, and that when he afterward applied for work in other rubber factories in Akron, he found that he had been blacklisted for the reason that he belonged to a rubber workers' union. Attorneys for the defendant filed a demurrer to Kiefer's petition, based upon a decision by the supreme court of Ohio (in *Schaeffer v. New York, Chicago and St. Louis Railroad Co.*), holding that an employer could not be required to give a reason for discharging or refusing to employ any person. In his decision Judge Webber concedes the force of the precedent cited in the demurrer, so far as it relates to the right of an employer to discharge an employé without stating a reason therefor. But the judge holds that "employés have a legitimate right to organize unions for their mutual benefit," and that "employers have no right to enter into an agreement among themselves by which they agree with each other to discharge employés for the reason that such employés were, or are, in sympathy toward, or connected with such labor union." Therefore Kiefer will be permitted to submit proof of his charges.

\* \* \*

MR. H. S. FIRESTONE, general manager of the Firestone Tire and Rubber Co., on July 1 closed a contract with the Dunlop Tire Co., Limited, of Toronto, Canada, by which the latter company will manufacture and market the Firestone side-wire tire. The Dunlop company have long wanted a vehicle tire and for some time negotiations have been on, culminating in the Firestone company licensing the Dunlop company to manufacture the tire mentioned in Canada. One of the first moves of the Dunlop company after securing the privilege was to equip the tallyho at the King Edward hotel, in Toronto, with a set of the tires, as an advertisement.

\* \* \*

THERE seems to be no limit to the uses to which hard rubber can be put. New experiments are being made in the plants of the rubber companies in this city every day, and every little while something new is produced. Richard Mason, one of the American Hard Rubber Co.'s employés, has experimented a great deal with hard rubber, and recently decided that hard rubber pool balls would wear longer, and answer every purpose of the composition balls which are now in general use. Accordingly he manufactured a set of them and they are now in use in a pool and billiard room here. Apparently they are every bit as "lively" as the ordinary pool ball, and experts who at first play with them can hardly be made believe that they are rubber. Along this line the experiments which have been made the past winter in this city with hard rubber bowling balls are interesting. Joseph Dangel, superintendent of the plant of the American Hard Rubber Co., is an enthusiastic bowler, and he resolved one day to try to turn out a rubber ball which would answer the purpose of the *lignum vitae* balls. He experimented a long time before getting a compound to suit him, but finally turned out a satisfactory ball. He used it a number of times and found that it was every bit as good as the *lignum vitae* balls. Since then he has made a number of

them for his friends and they have been tried under all kinds of conditions. They do not crack or chip as do the *lignum vitae* balls, and when bowlers once get accustomed to them they will use no other. They are made in red and black rubber, and but for their cost may prevent them from soon supplanting the wooden balls. The rubber balls as yet cannot be manufactured for less than \$18, while a wooden one can be secured at a cost not to exceed \$5.

\* \* \*

AT last it seems probable that Colonel George T. Perkins, president of The B. F. Goodrich Co., will be able to give to Akron the fine park of 60 acres which he has been trying to donate to the city for the past two years. One condition is attached to the gift, and so far this has been the cause of all the trouble. Colonel Perkins made it obligatory upon the part of the city to construct and maintain a macadamized road through the park, and as this could not be done for less than \$20,000, the city has been backward in accepting the gift. Twice it has been voted upon, and each time the proposition lost. Colonel Perkins good naturedly held open his original offer, and now the provisions of the new municipal code are such that it will be possible for the city council to accept the gift and arrange for the construction of the road without asking the consent of the taxpayers. At a recent meeting of the council the matter was taken up and referred to the proper committee.

\* \* \*

THE employés of The B. F. Goodrich Co. have formed a cricket club, and it is the intention of the players to make it one of the most popular athletic clubs in the city. Mr. George W. Daum is one of the prime movers in the new club. The Blue Pond park grounds have been leased and the club practices twice a week. The base ball team of The B. F. Goodrich Co. have won every game played there for this season. Their defeat of the Postoffice team was a surprise, as the letter carriers were considered invincible.

One of the most enjoyable of the many Fourth of July exhibitions of fireworks in this city was that of Colonel George T. Perkins, president of Goodrich company, given at the home of his son-in-law, Mr. C. B. Raymond, manager of the local factory of the American Hard Rubber Co. Mr. Raymond has just completed one of the finest residences in the city, and the celebration was partly of the nature of a house warming. Several hundred people enjoyed the display of fireworks and the hospitality of Mr. and Mrs. Raymond.

The annual picnic of the employés of the Goodyear Tire and Rubber Co. and the Buckeye Rubber Co., was held at Silver Lake on June 27. Over 1000 persons were present, and the day was very enjoyably spent. A ball game between the foremen of the two factories and a team picked from the employés resulted in a victory for the latter by a score of 6 to 4. O. Smith won the boat race.

The B. F. Goodrich Co. are building an addition to their machine shop on Falor street. It is to be of brick, one story in height, and, while not large, will make their machine department more convenient.

The Hon. George W. Crouse, one of the pioneers in the rubber business in Akron, has been adjudicated a bankrupt by Judge Francis J. Wing, at Cleveland. This marks the end of the troubles which grew out of the failure of The Aultman, Miller & Co., of which Mr. Crouse was president, and upon whose paper he is an endorser to the extent of \$1,883,734.04. Mr. Crouse's liabilities are given as \$1,950,238.06, and his assets, \$218,746.67. On Friday, June 26, Judge W. A. Vincent, of Chicago, paid to the trustees of The Aultman, Miller & Co. \$640,000 in cash for the plant and other assets of the company.

Judge Vincent announces that the plant will be operated as it has been in the past.

Mr. Burton Foster Stauffer, foreman of the specialty department of The B. F. Goodrich Co., and Miss Minnie Adele Johnson, daughter of Mr. and Mrs. A. H. Johnson, of Akron, were married on June 30.

Word has been received here of the sudden death in Bridgeport, Connecticut, of Mr. John H. Campbell, a former well known lawyer of this city. Three of Mr. Campbell's sons are connected with the rubber trade, Charles E. being secretary of the Camp Rubber Co., of Ashland; Harry E., superintendent of the Republic Rubber Co., of Youngstown, and Arthur E., with The B. F. Goodrich Co., of this city. Mr. Campbell died of heart disease at the age of 54 years.

The employés of The Whitman and Barnes Manufacturing Co. held their annual outing on July 11 at Conneaut Lake, Pa., and a large crowd enjoyed the many forms of amusement at the lake. A special train carried the excursionists to and from the lake. A program of athletic events added to the pleasures of the day, one of the features being a ball game between the shop teams, "Harmonics" and "Popularies."

W. L. Wild, of this city, secretary and treasurer of the India Rubber Co., has spent a good deal of time lately in New Brunswick, New Jersey, in connection with the plans of the Rubber Goods Manufacturing Co. to open a factory at that place, as reported in the last *INDIA RUBBER WORLD*. It is expected here that Mr. Wild will become secretary of the India Rubber Co. of New Jersey, and A. L. Dickinson, assistant treasurer of the local company, may assume a like position with the new. The local office will remain open for several months yet, as there is a great deal of business to be taken care of before it is finally closed. The employés in the factory here found no trouble, after the fire, in obtaining employment in other factories. Much of the machinery, which remained uninjured, has been shipped to the Hartford factory of the Rubber Goods Manufacturing Co. and a large Corliss engine has been sold to parties outside of the rubber trade.

Mr. C. C. Goodrich, of The B. F. Goodrich Co., is an enthusiastic golfer, and in the club tournament at the Portage Golf Club greens July 4 made a record which has never been equaled on the local course. In the driving contest for a silver cup presented by Mr. W. B. Miller, secretary of The Diamond Rubber Co., Mr. Goodrich made a score of 48.

The Goodyear Tire and Rubber Co. have filed a suit in the common pleas court here against the Consolidated Rubber Tire Co., in which it asks damages to the amount of \$26,902.13, with interest. It is alleged that the defendant company are guilty of a breach of contract entered into by the two companies July 27, 1899, whereby the Goodyear company were to be reimbursed for any loss, damage, or expense incurred, due to any suit which the Consolidated company might bring against any parties with whom the Goodyear company had contracts. The complainants allege that they have been put to the expense of \$26,902.13 on account of suits brought against Sam E. Finney, of Atlanta, Georgia, and others for alleged infringement of patents, and that payment has been demanded and that the Consolidated company have refused to make it.

The tile used in the construction of the new Akron City Hospital was donated by Mr. H. B. Camp, who made a fortune in the clay industry before becoming identified with the rubber business through the Faultless Rubber Co. and the Camp Rubber Co., of which latter he is president. Mr. Camp is still interested in a tile factory, and it has become known through an accident that he supplied \$10,000 worth of tile free of charge for the hospital.

John E. Joseph has resigned his position with The B. F. Goodrich Co. to accept the management of the Union Rubber Co.'s store here.

James W. Hoffert, assignee of the People's Hard Rubber Co., Akron, has filed a schedule of the assets and liabilities of the company in the probate court here. It shows that the assets and liabilities have been purchased by Fritz Achellis, president of the American Hard Rubber Co., and that he is the only creditor of the company. The total liabilities amount to \$191,753.07.

Messrs. T. W. Miller, of the Faultless Rubber Co., Harry C. Miller, formerly of the Union Rubber Co., and Mr. Wolff, purchasing agent of The B. F. Goodrich Co., are all interested in a delightful little fishing camp situated on a beautiful lake not far from Akron, Ohio.

Although the mammoth building, which was the last addition to the plant of The B. F. Goodrich Co., gave one-third more floor space than heretofore, all of it is already utilized and several departments are clamoring for more room.

It is rumored that the plant of the late Peoples Hard Rubber Co. (Akron, Ohio) is to be utilized as an automobile factory.

#### THE RUBBER TRADE IN TRENTON.

BY A RESIDENT CORRESPONDENT.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Extensive improvements to be completed early in August are in progress at the plant of the Trenton Rubber Manufacturing Co. A complete fire fighting system is an important feature of the improvements. This consists first of a sunken brick and concrete reservoir 30 X 20 feet and 9 feet deep, placed near the main building, with a water capacity of 125,000 gallons.

Then 8-inch fire mains are being laid around the yard and through the works, and attached to these will be seven two-way fire hydrants placed at advantageous points. A high water pressure will be provided by a underwriters' fire pump of a capacity of 1000 gallons a minute. The system is being installed by the General Fire Extinguisher Co. (Philadelphia). As soon as this is completed, it is the intention of the company to organize the employés into a fire brigade. The men will be kept thoroughly drilled in the work of operating the system quickly. The threads on the hydrants and hose couplings are of the standard pattern used by the Trenton fire department, so that in case of a serious fire the factory brigade can instantly be reinforced by the city department. The company are also installing a new hydraulic three platen press, 25 feet by 50 inches. It was built to the company's order by the Farrell Foundry & Machine Co. (Ansonia, Conn.) The new press was made necessary by the rapid growth of the company's business in packings and pure gum goods. The company reports the past year's business as the most prosperous in their history. The increase has also made necessary the installing of new hose machines, mills, jar ring lathes, small hydraulic presses for light work and additional facilities for the manufacture of corrugated matting and mats. The plant is now one of the best equipped in the city.

The Hamilton Rubber Manufacturing Co. are having an artesian well sunk in the rear of their works on North Clinton avenue. The work is being done by the Rust Well and Machine Co. (Ithaca, N. Y.) and it is the intention to drive to a depth of about 400 feet. The well is expected to produce from 150 to 200 gallons a minute. The company expect to draw their entire water supply from this well. At a depth of 7 feet below the surface the drillers struck solid rock, and at this

writing (at a depth of 80 feet) the rock is still being encountered.

A new three story, 30×60 feet, brick addition to the factory of the Crescent Belting and Packing Co. is completed and the machinery is being placed in position. The first floor will be a machine shop, equipped with lathes, drills, planers, shapers, and other machines to enable the company to do their own repair and other machine work. The second floor will be equipped with new spoolers and skeiners, for the insulated wire department. The company report the best six months' business in their history. The orders indicate a busy month for August, with no shutdown.

The manufacture of rubber carriage cloth is developing into one of the most important branches of Trenton's rubber industry. This branch of the business was established some years ago by the Empire Rubber Manufacturing Co., and the concern has built up a large trade in this line. The new Eureka Rubber Manufacturing Co. of Trenton have gone into the field and are turning out a high grade, for which there is a steadily increasing demand.

The Union Rubber Co. now have eleven salesmen on the road, covering the whole country to the Pacific coast. The company have established western headquarters with the Carriage Supply Co. at No. 856 West Sixth street, Cincinnati. A handsome oak sample case has been added to the offices in the Broad Street Bank building, Trenton.

Mr. H. E. Evans, manager of the Consolidated Rubber Co., spent his annual vacation at Atlantic City, where he attended the session of the national senate of the National Union, of which order he is chaplain.

The Lambertville Rubber Co. have resumed operations after a two weeks' shutdown, during which the inventory was taken and necessary repairs made, including the placing of new tubes in the boilers.

L. S. Stout, aged 35 years, an employé of the Grieb Rubber Co., was painfully burned while at work in the mill, by a cauldron of rubber cement mixture boiling over on him, but will suffer no permanent injury.

The De Laski & Thropp Circular Woven Tire Co., mentioned in this column last month, have elected officers as follows: John E. Thropp, Jr., president; Frank W. Thropp, vice president; Peter D. Thropp, secretary and treasurer. Albert De Laski and Peter Thropp were in the West during the month in the interest of the company. Experiments with Mr. De Laski's invention for weaving automobile and other tires are still in progress at the works of the John E. Thropp Sons Co. The company's plans for a factory are not yet complete.

The Reliance Rubber Manufacturing Co. have practically all their machinery installed, have begun grinding rubber, and expect to be making goods by August 1. At first their work will be confined mainly to molded goods and tubing, the latter of a grade developed by superintendent Charles H. Joslin when he was employed at the Globe works. Having been organized so late in the season, they will postpone entering the hose trade until another year.

The Eureka Rubber Manufacturing Co. of Trenton report that business is opening with them in a satisfactory manner, particularly in rubber carriage cloth. Two new mills, 18×50 inches, from the Farrel foundry, have just been added, and a new two-roll washer ordered. Seven presses are in operation in the molded goods department, and several large orders have been booked. Good orders for their "Admiral" brand of cotton hose have been received from Chicago. Molds are being made for a line of horseshoe pads.

The Woven Steel Hose and Cable Co. have secured larger

and better quarters at No. 226 South Warren street. Organized four years ago, this concern has built up a large trade in its specialty of steel armored hose, and is now developing as a selling agency for a general line of mechanical rubber goods. The president of the company is John S. Broughton, who is also secretary and general manager of the United and Globe Rubber Manufacturing Cos. The vice president is John H. Janeway, of the John A. Roebling's Sons Co.; Karl G. Roebling is treasurer, and J. R. Kelso, manager. The process of armoring the hose is the invention of Mr. Roebling, who also designed the machine for applying the armor.

On July 22 lightning struck the building of the Raymond Rubber Co., at Titusville, damaging the office portion somewhat and severely shocking Messrs. George and Robert Agnew.

Steps have been taken by the Trenton rubber workers' union to formulate a new wage scale and inaugurate an apprentice system. A committee composed of five men from each factory are working on a plan to be submitted shortly to the manufacturers. The Rubber Manufacturers' Association of Trenton have posted notices in the factories promising protection to non union employés.

The Pennsylvania Railroad Co. have purchased a large tract of land east of Trenton for their new shops, which includes a portion of the farm of Allan Magowan, Trenton's pioneer rubber worker, and on which is located the works of the Modern Rubber Manufacturing Co., composed of Mr. Magowan and members of his family. The removal of the rubber works thus becomes necessary and to provide for this Mr. Magowan retained strip of his land on the side adjoining the premises of the Trenton Rubber Manufacturing Co. The factory buildings are of frame construction and will be moved bodily, as will also Mr. Magowan's residence.

At the annual meeting of the Grieb Rubber Co., on July 1, the officers were reelected, as follows: William G. Grieb, president; C. H. Oakley, vice president and general manager; Harry Grieb, secretary and treasurer. George E. Leslie was reappointed sales manager. Messrs. Oakley and Leslie report trade good, with sales increasing. The company have installed an electric lighting plant with a 30 HP. engine and direct connected dynamo, which will furnish power also for several motors for operating light machinery. The company put into operation on July 20 a cement department, in a separate building, in which electric power will be used. The company have built a 60×12 foot extension to their boiler house, and are putting up a one story warehouse and packing room, 100×40 feet.

#### IN THE WILDS OF MEXICO.

FROM THE INDIA RUBBER JOURNAL (LONDON).

MR. PEARSON, the editor of our contemporary, who has been journeying through Mexico in order to satisfy himself as regards crude rubber planting, contributes to his journal an entertaining narrative of the expedition. Altogether apart from the technical value of the article, his description of the tour is as entertaining a piece of reading as one could wish for, being full of humor and of insight into the quaint habits of the natives. Mr. Pearson records that his first ride on horseback was more in the nature of an experiment than anything else, and that on the second day, when they started out to visit the neighbors, he wanted to walk. That being out of the question, however, he had to mount a mare which had the habit of imagining she saw a snake ahead on the trail, and of suddenly leaping to one side. He stayed with her every time, and is still just as much surprised at it as she was.

## THE TEXTILE GOODS MARKET.

THE staple cotton market continues to be jostled about on the horns of the bulls in the pit, who appear to have such control of the spot cotton of the country, that they can manipulate the near by options with ease and complacency. This fact has been demonstrated a great many times during the past month, when, although the trading was generally dull, the market maintained its firmness, with surprising tenacity at times. The latter months displayed a tendency to drag because of the favorable crop news, but even such options have not been able to keep out of the clutches of the bulls. About a week ago the market took on a slightly stronger tone, and prices went soaring, although without any cause to support the movement other than the orders of the bull clique, until middling upland spot touched 13.50, where it still remains. Under conditions of this kind it is exceedingly difficult to forecast the future, and most of the traders are moving very cautiously, while speculators on the outside are holding off entirely.

Domestic spinners have given very little support in the way of buying cotton, and their takings have been next to *nil*, although consumers on the other side of the Atlantic are reported to be showing more interest in spots. Rather than buy at present prices the American manufacturers have been curtailing their production in every possible way. Those that have any cotton at all have been working their machinery on part time in order to make it hold out until the new crop materializes. Those who have exhausted their supplies have in most instances closed their mills, as the only alternative under the circumstances. Some of them, having run short of cotton before completing their contracts, have paid as high as 16 cents for a sufficient quantity to carry them through, and quite a number have bought cotton at 14 cents. One large mill is known to have covered its necessary requirements at 16 cents. Of course there is no intention on the part of the owners of these mills to increase their output until consumers show a desire to pay a sufficient price for goods to allow the manufacturers a fair profit on their product. The manufacturer cares little what may be the cost of cotton if the market will settle down to a basis that can be depended upon to remain stationary for a few months. In such a case they would buy cotton and make goods for which the consuming public would be compelled to pay the price asked, but this course cannot be pursued when the price of cotton is likely to drop as soon as the mills have covered themselves. Manufacturers that have closed their mills and those that contemplate doing so are compelled to take this course because they failed to appreciate the cotton situation in time, and have not been able to secure the grade of cotton which their machinery requires. Other mills, as fast as they exhaust their stock, will be compelled to stop for the same reason. It is simply and purely a cotton famine.

The following table gives the price of cotton middling upland spots at the ports of New York, New Orleans and Liverpool:

	New York.	New Orleans.	Liverpool.
July 7.....	11.60c.	13 $\frac{3}{4}$ c.	6.30d
July 14.....	12.20c.	12 $\frac{3}{4}$ c.	6.20d
July 21.....	12.75c.	12 $\frac{3}{4}$ c.	6.40d
July 28.....	13.50c.	13 $\frac{3}{4}$ c.	6.64d

That the rubber trade will be compelled to pay a much higher price for its textiles during the next year, seems now beyond a doubt, and the manner in which they have been making requisitions on the cotton duck manufacturers during the past few weeks shows that no one knows this fact better than the rubber people themselves. Last September, when the rubber manufacturers were placing their orders with the duck mills for

enough goods to carry them through the year, they made the maximum limit much higher than ever before. There were two reasons for this course. The rubber people anticipated a larger demand for their goods in the first place, and furthermore there was nothing to be lost by raising the maximum limit, so long as they would not be compelled to take the goods in case they did not require them.

Whether or not they have needed all the cotton duck that was ordered, matters very little; they have taken all the duck mills could deliver up to date, and are eagerly pressing the mills for the remainder of their order—that is, all their contracts call for. Rubber manufacturers who have been buying as their requirements dictated, have had to pay in some cases 5 cents per pound more for textiles than they did the year before. By September 1, they will be in the market looking after their supplies for another year, and it is not news to the rubber people to announce that contracts will be made on a much higher price basis. If they can cover their year's needs at a lesser advance than 5 cents over old contract prices, congratulations are in order, and the organization that neglects to make a contract for the entire year, hoping to get his cloth cheaper later in the season, will be assuming great chances. He may get through the year by buying in a hand to mouth fashion without paying any more than the fellow who makes a year's contract, but if he does it will be because the bottom has fallen out of the cotton market before the manufacturers cover their raw material requirements, which is extremely unlikely. Some of the cotton duck mills have already run out of cotton, but they are meeting their contracts, which is as much as they can do.

It has been hinted in the textile market that contracts with the belting and mechanical rubber manufacturers will be made on an entirely different basis another year. From this, it is inferred that the cloth manufacturers will ask the rubber people to assume more of the responsibility than has been the case in the past. The former look upon the old fashioned contract as no contract at all so far as protecting themselves is concerned, and hereafter they are going to ask the consumers to help carry whatever burdens develop during the season.

Prices of the various textiles used by the rubber trade have not altered during July, but the market is exceptionally firm on the basis of the following quotations:

## FABRICS FOR THE RUBBER TRADE.

Forty-inch Majestic C. C.....	7 $\frac{1}{4}$ cents.
Forty-inch Majestic B. B.....	6 $\frac{1}{4}$ cents.
Forty-inch Majestic B. B.....	6 $\frac{1}{4}$ cents.
Forty-inch, Elcaney.....	5 $\frac{1}{2}$ cents.
Thirty-six inch, India.....	6 cents.

Sheetings.	40" Selkirk.....	7 $\frac{1}{4}$ c.	40" Shamrock...8 $\frac{1}{2}$ c.
40" Highgate...5 $\frac{3}{4}$ c.	40" Sellew.....	7 $\frac{1}{4}$ c.	Ducks.
40" Hightown...6 $\frac{1}{2}$ c.	48" Mohawk...10 c.	40" 7 oz. Cran-	
40" Hobart...6 $\frac{1}{2}$ c.	40" Marcus...5 c.	ford...8 c.	
40" Kingstons...7 $\frac{1}{2}$ c.	40" Mallory...5 c.	40" 8 oz. Chart-	
39" Stonyhurst...5 $\frac{3}{4}$ c.	36" Capstans...4 c.	res....8 $\frac{1}{2}$ c.	
39" Sorosis....5 c.	40" Osnaburgs.....	40" 10 oz. Carew.10 $\frac{1}{2}$ c.	
40" Seefeld...7 $\frac{1}{2}$ c.	40" Iroquois.....	40" 11 oz. Carita.11 $\frac{1}{4}$ c.	

The demand from the rubber boot and shoe manufacturers for sheeting has been of an average character all through the month of July. Those buying at the present time are paying no more money for their goods than they did during the fore part of the month, but prices are very firm and in every instance the full quotation has been paid. The market has not superabundance of sheetings on hand, and with the curtailment going on at the mill end, the tone of the market for cloth is naturally strong. Deliveries are being made to the satisfaction of the consumers so far as known, and the outlook for business from the rubber footwear makers is all that the textile manufacturers could ask for.

## NEWS OF THE AMERICAN RUBBER TRADE.

## BOSTON GOSSAMER RUBBER CO. LIQUIDATING.

THE following letter which was sent out to customers of the Boston Gossamer Rubber Co. was received with much surprise and a great deal of regret. The reason for the liquidation of the company as stated in the letter is the sudden illness of Mr. S. Klous, who was taken with a hemorrhage of the nose and came very near bleeding to death. Physicians, claim that in reality the hemorrhage in all probability prevented a paralytic shock and was, therefore, a blessing in disguise.

THE BOSTON GOSSAMER RUBBER CO.,  
S. KLOUS & CO.  
*Manufacturers of Rubber Clothing.*

HYDE PARK, MASS., July 9, 1903.

Gentlemen: We deeply regret to be obliged to inform you that owing to the recent sudden and serious illness of our Mr. S. Klous, it has become necessary that he retire from all active business, and in consequence of this and the further fact that our Mr. H. D. Klous's health at the present time renders it imprudent for him to undertake to carry on our business, we have decided to liquidate at once, and trust that this action will put you to no inconvenience.

We wish to thank you for the very pleasant relations that have existed between us, and wish you the greatest possible success for the future.

Yours very truly,

THE BOSTON GOSSAMER RUBBER CO.

Mr. Klous long has been one of the most interesting figures in the rubber clothing trade, and has been universally respected and loved. He was born 81 years ago in Breslau, Prussia, and when 16 years of age was foreman of a factory in Berlin with 60 men under him. He came to the United States when he was 20 years old and after a time went into the hat, cap, and fur business. He followed this until the great Boston fire in 1872, at which time he was not only the largest manufacturer and dealer in his line, but he was also an exceedingly wealthy man, owning much real estate in and about Summer street. The fire affected his business so disastrously that he was obliged to make a fresh start. Indeed, it was said that of all the business men in Boston he was the largest individual loser. He therefore started, in 1888, a small proofing plant at Readville, and a making-up department in Boston, the line of manufacture being gossamer rubber garments. In 1890 he built a fine plant at Hyde Park and induced his son, Mr. H. D. Klous, to join with him in the business. The company although known as the "Boston Gossamer Rubber Co." was never incorporated, as it was a partnership, the partners being father and son, and operating under the name of "S. Klous & Co." After there ceased to be a market for gossamer rubber goods Mr. Klous took up the manufacture of a full line of mackintosh clothing and was for years undoubtedly the largest manufacturer in that line in the United States.

In the process of liquidation the factory and some twenty acres of real estate will be sold and Mr. H. D. Klous will devote himself to the care of his father's properties, which are large.

## ASSIGNMENT OF THE CABLE RUBBER CO.

THE Cable Rubber Co. (Jamaica Plain, Mass.) made a voluntary assignment on July 15, the assignees being B. L. M. Tower, representing the Cable interests, and Frank Tent, of the Hamilton National Bank (Boston), representing the creditors. The news of the assignment came as a great surprise to the trade. The Cable Rubber Co. was founded in 1881 by Wheeler Cable, who was accounted one of the most skillful rubber men of his day. The line of manufacture was carriage drills, melodeon

cloth, heavy clothing, etc. Since the death of Wheeler Cable in January, 1899, the company has been operated by William J. Cable, and S. H. Cable, the former being the treasurer and sales manager, and the latter superintendent. Nearly all of the stock was held in family, Mr. William J. Cable being the largest individual owner. The embarrassment was due to large contracts for carriage cloth taken when supplies were at a lower figure, the advance in rubber and in cotton duck causing the business to show a loss. As there are many orders on hand, it is thought that after a temporary suspension the business will be resumed.

## HOUSATONIC RUBBER WORKS (BRIDGEPORT, CONN.).

A CONTRACT has been awarded for the erection of an additional building, 155×40 feet, part brick and part frame. Mr. J. A. Wilson, proprietor, informs THE INDIA RUBBER WORLD that the new facilities in prospect will permit the present capacity of the works to be more than doubled. The business of this establishment is the removal of cloth and fiber from waste rubber.

## HARTFORD RUBBER WORKS CO.—FACTORY EXTENSION.

WORK has been begun on an extensive addition to the factory of this company and will be hurried through for completion at the earliest possible date. The building of this addition had been contemplated for several months, but it has now become a positive necessity on account of the increase of their business, and particularly that portion pertaining to the manufacture of pneumatic automobile tires and solid carriage tires. The new building will occupy a space of about 100×200 feet, being of brick construction and brownstone trimmings, somewhat similar to the present main building of the company's plant. It will consist of 3½ stories and basement and subbasement. Its architectural design is a pleasing one, a tower in the center affording a change from the ordinary factory construction. The company are also about to double their power plant by installing a new 1000 HP. steam engine.

## THE CANADIAN RUBBER CO. OF MONTREAL.

PLANS were submitted recently, at a special meeting of shareholders, for the extensive remodeling of the plant of this company, which plans were approved, and the directors empowered to make an issue of bonds to provide the necessary additional capital. The plans have not been worked out in detail, but THE INDIA RUBBER WORLD is advised by an official of the company that the idea is to double the capacity of both the mechanical goods and the boot and shoe departments. The machinery to be added is to be of the latest improved types, and in its installation a partial re-arrangement of the existing factory plans will be necessary.

## FAILURE OF LAMKIN &amp; FOSTER (BOSTON).

LAMKIN & FOSTER, shoe jobbers, No. 172 Congress street, Boston, have been petitioned into bankruptcy, the petition not being opposed by the firm. The firm was organized in 1873 by the late William C. Lamkin (who died in 1890) and Alfred S. Foster, who recently has been only a general partner. For several years, up to January 1, last, the firm were exclusive New England agents for the footwear of the Goodyear's India Rubber Glove Manufacturing Co.; but since then several other houses have been admitted to the sale of these goods. Prior to the proceedings mentioned above, attachments were levied against the firm to a large amount, the United States Rubber Co.'s claim being reported at \$150,000. Two Boston banks are

large creditors, and many notes to other parties are well scattered. Liabilities are stated at about \$677,000 and the assets \$626,000. The last statement of capital was \$295,000, and the amount of sales \$1,600,000. Lewis T. Bartlett and Elias W. Lavers have been appointed receivers, by the United States court. At a meeting of creditors on July 8, Mr. Foster stated that the firm's finances for 23 years past had been looked after by E. E. Leavitt, a member of the firm, in whom the others had full confidence. The first knowledge of the firm's embarrassed condition came after the disappearance of Mr. Leavitt, upon an examination of the books. The creditors appointed a committee to act in their behalf, consisting of John McNair, a Lynn bank president (chairman); C. M. Brett, C. S. Fuller, and I. L. Prouty, shoe manufacturers; and George P. Eustis, representing the United States Rubber Co.

#### MODEL RUBBER CO.'S PLANT TO BE USED.

A COMPANY has been organized, under the style of Brindle Brothers, to manufacture elastic webbing, feather edge tapes in cotton and silk, and all kinds of narrow fabrics, in the plant occupied by the late Model Rubber Co., in Oak street, Woonsocket, Rhode Island. Robert Brindle is president and treasurer and Thomas Brindle general manager. The factory buildings have not been used since the end of 1901, and were disposed of at public sale on August 21, 1902, to Fred L. Smith.

#### TERRENCE McCARTY TO MAKE RUBBER SHOES?

IN reply to an inquiry Terrence McCarty, of Bristol, Rhode Island, informs THE INDIA RUBBER WORLD: "I am just breaking ground to set up my engine and dynamo and have purchased some rubber machinery. My plans, however, are not yet perfected, but I assure you that I shall be pleased to give you full particulars as soon as there is anything for publication." Mr. McCarty, after having been connected with the National India Rubber Co., organized the Byfield Rubber Co. at Bristol and was superintendent of its factory so long as the company continued in business. In the summer of 1900 Mr. McCarty purchased land adjoining the Byfield factory and erected a building on it, which he still owns and will utilize in his new industry. It is understood in Bristol that the product is to be rubber footwear.

#### ALDEN RUBBER CO.—NEW YORK BRANCH.

THE Alden Rubber Co. (Barberton, Ohio) have opened a branch store in New York at No. 111 Chambers street, which has been placed in charge of Mr. C. J. McDaniel, whose experience in the Eastern states, in connection with leading rubber companies, has equipped him admirably for the sale of the specialties which he is now marketing for the Alden company.

#### THE POPE MANUFACTURING CO.

THE complete organization is now reported of this company, headed by Colonel Albert A. Pope, as mentioned already in these pages. The official list follows:

*Directors*—William A. Read, Colgate Hoyt, F. S. Smithers, G. F. Crane, Alfred L. Pope—all of New York; Albert A. Pope and Charles Hayden, Boston; Colonel George Pope, Orange, New Jersey; S. C. Winslow, Worcester, Mass.; G. T. Hollister, Rutherford, N. J.

*President*—ALBERT A. POPE.

*Vice President*—ALBERT L. POPE.

*Treasurer*—GEORGE POPE.

*Secretary*—PAUL WALTON.

On the evening of July 3 a reception was tendered to Colonel Albert Pope at Hartford, Connecticut, by the Business Men's Association of that city, and attended by the Governor and leading citizens. In addressing the guests, Colonel Pope spoke hopefully of the future of the bicycle trade, though the success of his company would not depend upon that alone. They will also make automobiles. "The automobile," said he, "is as

much bigger than the bicycle as it weighs more than the bicycle," and a new model was being worked out to be made at the Columbia factory, in Hartford. They would introduce other features, also; a contract had been signed for the manufacture of an improved cash register, for example, and Colonel Pope predicted that there would be work enough for all the factories taken over from the American Bicycle Co.

#### APSLY RUBBER CO. (HUDSON, MASS.)

THE annual statement of condition (May 4, 1903), filed with the Massachusetts commissioner of corporations, gives the following details:

ASSETS.	LIABILITIES.
Real estate..... \$164,627	Capital stock..... \$450,000
Machinery..... 158,208	Debts..... 454,027
Cash and debts receivable..... 381,083	Profit and loss..... 60,558
Stock in process..... 236,827	
Patents, trade marks..... 23,840	
	Total..... \$964,585
Total..... \$964,585	

#### WOONSOCKET RUBBER CO.

THE details of the statement of condition (March 31, 1903) filed by this company with the Massachusetts commissioner of corporations compare with the statement for the preceding year as follows:

ASSETS:	1903.	1902.
Real estate..... \$897,543	\$ 902,403	
Machinery..... 324,135	336,659	
Cash and debts receivable..... 3,411,309	1,705,443	
Stocks in process..... 1,640,297	2,083,850	
Adjustment of inventory..... 1,198,994	.....	
Miscellaneous..... 1,188	.....	
	Total..... \$7,473,466	\$5,028,355
LIABILITIES:		
Capital stock..... \$3,000,000	\$3,000,000	
Debts..... 2,805,999	1,543,861	
Fixed surplus..... 1,613,900	414,905	
Profit and loss..... 53,567	69,589	
	Total..... \$7,473,466	\$5,028,355

The factory has been running full time all summer, with an unusually large working force. It was reported lately that the force of women employed in the "Alice" mill was about to be increased from 300 to 400, and that there probably would be no shutdown for the summer.

#### BANKRUPTCY OF DRESSER & CO. (NEW YORK).

JUDGE ADAMS, of the United States district court in New York, on July 9, signed an order for adjudication in bankruptcy of Dresser & Co., commission merchants in hosiery, silks, and elastic webbing, Nos. 15-17 Greene street, New York, and referred the matter to Stanley W. Dexter, referee in bankruptcy, of No. 71 Broadway. It had previously become known to the firm's creditors that D. Le Roy Dresser, the head of the firm, would not be able to fulfil his agreement [see THE INDIA RUBBER WORLD, May 1—page 279] to deposit securities sufficient to meet all their claims, owing to the depreciation which said securities had undergone, and the creditors may not now receive more than 25 or 30 per cent. of their claims.—The time allowed to the receivers appointed under the original proceedings in this case, to continue business, was finally extended to July 27. Up to June 29 they had sold \$314,956 worth of goods, on which \$159,290 had been collected, besides collections of \$390,000 due the firm on open account on old business. On July 12 the outstanding accounts were reported at \$111,000, and the receivers had a balance in bank of \$89,076, with current expenses paid.—The affairs of Dresser & Co. appear to have become involved through the connection of Mr. Dresser with the organization of the United States Shipbuilding Co., the

plans for which it was not possible to carry out fully. The Trust Co. of the Republic (New York), of which Mr. Dresser was then president, was also involved, in consequence of which the capital of the trust company has been reduced from \$1,000,000 to \$500,000, the remainder being charged against losses. —A member of the trade suggests to THE INDIA RUBBER WORLD, but without assuming to speak for Mr. Dresser: "No doubt Mr. Dresser had friends ready to assist him to discharge the debts of Dresser & Co., in full, as promised. But when other financial troubles began to develop, in connection with the shipbuilding deal, his friends advised him to let the firm of Dresser & Co. go through bankruptcy. If they should spend in settling the affairs of this firm the few hundred thousand dollars with which they were ready to assist him, it would leave them less able to assist him in event of possibly more serious embarrassments resulting in other directions."

THE CONTINENTAL RUBBER WORKS (ERIE, PA.)

THIS is a new company, having \$200,000 capital subscribed, for the manufacture of mechanical rubber goods. They have purchased the plant of the American Cycle Manufacturing Co. known as the "Tribune" factory, at Erie, Pennsylvania, which is admirably fitted for the purpose to which it is to be put. Machinery has been ordered, with guaranteed delivery during September. The power plant is to be increased by adding two 250 HP. boilers and one 250 HP. engine. There is plenty of room for additional buildings, if necessary. The company will make single tube and double tube automobile and bicycle tires, and a general line of mechanical goods and molded work. The company are composed principally of Erie people. The

general manager and superintendent will be Theron R. Palmer, some time superintendent of the tire department of The B. F. Goodrich Co., and later superintendent of the Pennsylvania Rubber Co. The manager of sales will be Charles F. U. Kelly, also formerly with The B. F. Goodrich company, and then with the Pennsylvania company in a like capacity. The factory will be equipped entirely with new machinery, good men have been engaged, and the purpose of the company is to make high class goods. The "Tribune" factory was erected in 1893 for a bicycle plant, and at one time gave employment to about 700 workmen. The factory buildings are all of mill construction, with heavy brick walls, erected upon solid stone foundation. The floor space is 102,500 square feet. The power plant includes a 400 HP. Brown-Corliss engine, and two dynamos capable of supplying electric lights and power for elevator motors, etc. The directors have elected officers as follows:

President and General Manager.—THERON R. PALMER.

Vice President.—ALEXANDER JARECKI.

Secretary.—CHARLES JARECKI.

Treasurer.—CHARLES S. COLEMAN.

Application for the charter of a company will be made to the governor of Pennsylvania on August 7.

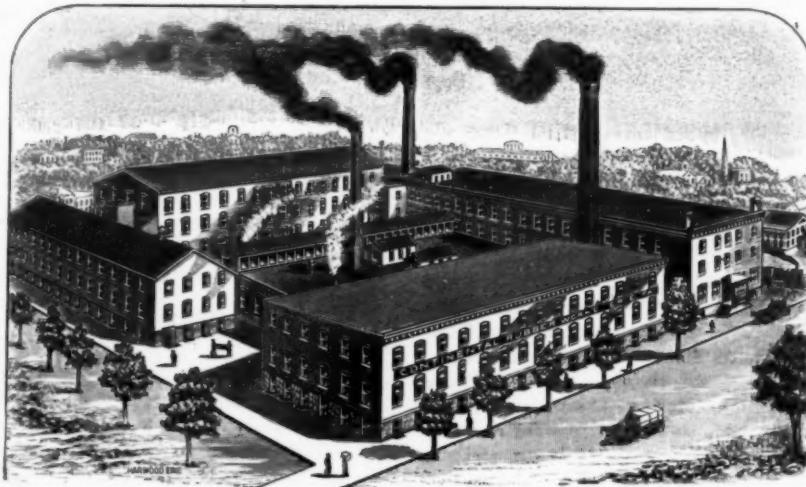
HEAVY NEW CABLE IN NEW YORK BAY.

A TELEGRAPH and telephone cable was laid on July 12 between New York and Ellis Island. This cable, manufactured by The Safety Insulated Wire and Cable Co. (New York), consists of 24 conductors, each insulated with a pure Pará rubber compound. Owing to the large number of vessels anchoring in the vicinity, the armor of this cable is exceptional, making it the largest and heaviest submarine cable yet manufactured, weighing 15 pounds per foot [=79,200 pounds per statute mile]. The cable was ordered by the United States government for connecting the offices of the bureau of immigration at Ellis Island—the famous landing point for immigrants to the United States—with the mainland. The cable will be used for long distance telephone calls and to accommodate both the Western Union and Postal Telegraph offices on Ellis Island.

AFTER A RUBBER MAN'S MONEY?

THE banking commissioners of New Jersey recently took charge of the offices in that state (at Jersey City) of the Interstate Trust Co., as an institution which seemed to merit official

investigation. This company obtained a New Jersey charter February 11, 1902, to do business in that and other states, the incorporators being reputable financial men in New York, and elaborate offices were opened in this city at No. 25 Pine street. One avowed object was the establishment of banks in small western towns, where local capital was lacking for the proper



CONTINENTAL RUBBER WORKS (ERIE, PA.).

development of the country, and the Interstate Trust Co. was to be a holding company for the shares of such banks. It now appears that the New Yorkers referred to speedily withdrew from the enterprise leaving its control to the original promoter, one Leonard Imboden, who is described as a man of engaging personality and hailing from the West, where he is asserted to have left a bad record. The resources of the Interstate Trust Co., it is asserted, consisted of securities of a chain of small financial institutions out of town, said to have been formed and controlled by the same Leonard Imboden, with very little real capital, the whole being a means to securing large credits in the East without any proper basis. It is stated that when the New Jersey officials interfered, the trust company was preparing to announce its capital as \$5,000,000 and to issue \$30,000,000 in bonds. Imboden appeared some months ago in Providence, Rhode Island, where he secured certain support, and a financial company was formed in which he was a "silent partner," but it is asserted by one of the partners, who withdrew from it very shortly, that the only man who put in any capital

was the son of a late wealthy rubber manufacturer. The feeling in Providence is that the sole reason for Imboden's interest in Providence was his hope of gaining control of some of the rubber man's millions. How far he succeeded remains to be learned.

**MONARCH RUBBER CO. (ST. LOUIS).**

IN regard to reported labor troubles at this factory, engaged in making rubber footwear, Secretary W. E. Hemenover advised THE INDIA RUBBER WORLD on July 20: "About a month ago we discovered there was a man here from Chicago by the name of Dunn, and he was endeavoring to organize our employés into a union. We found he was a blacksmith by trade, but had evidently become connected with the union in Chicago which comprises the employés of Morgan & Wright and the Chicago Rubber Works Co. As far as we are able to discover, he never saw a rubber boot and shoe factory, but he succeeded in convincing many of our employés that they were terribly abused, by telling them the most extravagant tales imaginable. He led them to believe that if they would become well organized they could demand and obtain something like 100 per cent. more than they were getting. However, many of our employés, and especially those familiar with wages and condition in other rubber boot and shoe factories, refused to be enticed by such absurd promises or to be forced into an organization that was destined to breed trouble, and partly because of their advice we closed our factory. This action the malcontents have been pleased to call a 'lock out.' About two weeks ago we started up again and are gradually gaining in production. We hope soon to have our ticket up to what it was before this trouble occurred."

**NATIONAL INDIA RUBBER CO.—A CLAMBAKE.**

A COMPLIMENTARY clambake was given by the salesmen, foremen, and clerks of the National India Rubber Co. in honor of Mr. Harry H. Shepard, general manager of the company, on the Church farm, near Bristol, Rhode Island, on the afternoon of July 18. It was attended by about a hundred persons, including some of the directors of the company, Secretary Samuel Norris, of the United States Rubber Co., and other representatives of that company's New York offices, members of the town government, etc. T. Smith McKeon was chairman of the committee on arrangements. Manager Shepard presided at the table. The clambake had been prepared by an expert, and was greatly enjoyed, as well as the social feature of the reunion. After the dinner a game of baseball was witnessed.

**THE WILLIAMS RUBBER CO. (LOS ANGELES, CALIF.).**

MR. H. O. HARRISON, sales manager of this company, the incorporation of which was reported in THE INDIA RUBBER WORLD June 1, 1903 (page 320), reports: "We carry a complete stock of all standard makes of automobile tires and carriage tires of all descriptions. We also have a complete vulcanizing establishment for vulcanizing all pneumatic tires made. In this respect, we have probably the most complete shop in the United States, and will make this work our specialty. In addition to tires, of course we handle all lines of mechanical rubber goods."

**FACTORY INSPECTION IN INDIANA.**

THERE are no occupations in Indiana in which child labor is prescribed by law. But Daniel H. McAbee, chief of the state department of inspection, in the sixth annual report of that office to the Governor (1902), suggests the propriety of following the example of various American and European states in prohibiting the employment of young persons in certain trades. He recommends that "Females under 16 should not be permitted to work in cigar, tobacco or match factories, or rubber

works. Females over 21 employed in rubber works should be limited to not more than 8 hours per day, with 1½ hours of rest and exclusion from the workroom." He advises the adoption of a law similar to that of Ohio, which provides that no person under the age of 16 shall be employed in certain work connected with machinery, including work at "calender rolls in rubber manufacturing." Mr. McAbee lately has been studying the conditions of calender work in rubber mills with a view to the protection of employés of every age from accidents. Of the 541 accidents in factories reported on during the year, three were in connection with roller work in rubber mills. A man aged 55 lost an arm while operating mixing rollers; a man aged 58 lost the fingers of one hand from a similar cause; and a boy of 14 lost a finger and had an arm fractured by an accident in connection with rubber rolls.

**THE RUBBER INDUSTRY IN INDIANA.**

THE annual report of the state factory inspector for 1902 gives statistics of four rubber factories, employing 485 males and 47 females—a total of 532—and steam plant of 1550 HP. Not included in this showing is the Mishawaka Woolen Manufacturing Co., producing woolen and rubber footwear, with 1200 males and 250 females employed, and using 1200 HP. steam and 1400 HP. water.

**MORE ROOM FOR THEODORE HOFELLER & CO.**

THEODORE HOFELLER & CO. (Buffalo, New York), who are among the largest handlers of old rubber in the world, have recently made an extensive addition to their facilities, by acquiring a four story brick building adjoining their already spacious establishment. The first floor of this building will be devoted to well appointed offices, including the private offices of Messrs. Theodore and Julius Hofeller. The three upper floors will be devoted to the details of the firm's shipping business. Each floor of the newly acquired building will be connected with a corresponding floor of the old establishment. Many new conveniences or improvements have been introduced, including a large new electric elevator. It is mentioned that an expert office force of twenty persons is employed.

**GIBSON-KING RUBBER CO. (NEW YORK).**

THIS is a new firm, engaged in the sale of mechanical rubber goods principally, located at No. 206 Broadway. Mr. R. Renwick Gibson was connected for some years and until recently with the Mineralized Rubber Co. (New York), and Mr. C. C. King, formerly of Mississippi, which state he represented as commissioner to the Paris exposition of 1900, has been engaged hitherto in the cotton trade. The business of the new firm includes selling arrangements for the Trenton Rubber Manufacturing Co.

**YATMAN RUBBER PLANT BURNED.**

THE factory of the Yatman Rubber Co., at Belgrave Drive and Passaic avenue, Kearney, near Newark, New Jersey, was destroyed by fire late on the night of July 11. It is understood that the loss is well covered by insurance.

**PROFITS OF THE AMERICAN CHICLE CO.**

AT the annual meeting in Jersey City, New Jersey, on July 21, a report was presented showing that after paying dividends during the year amounting to \$900,000, there were surplus undivided profits of \$776,000. Dividends on the preferred stock, at 6 per cent., amounted to \$180,000, and on the common stock, at 12 per cent., to \$720,000. New factories had been built and equipped, at Louisville, Kentucky, and Newark, New Jersey, and paid for out of the earnings. The official list remains as before: Directors: Thomas Adams, Jr., E. E. Beeman, W. J. White, G. H. Worthington, J. B. Primley, T. J. Jefferson, Charles

R. Flint, Thomas Adams, Sr., Stephen T. Britten, Henry Rowley, W. H. White, James C. Young, T. L. Jefferson. Thomas Adams, Jr., is chairman, W. J. White president, G. H. Worthington vice president, and Henry Rowley secretary and treasurer. Recent quotations for the company's shares were: Preferred, 80 bid, 93 asked; common, 110 bid, 114 asked.

#### WHOLESALE RUBBER STEALING.

THE last number of the INDIA RUBBER WORLD chronicled the theft of six cases of fine Pará rubber from the Joy Steamship line, of which, by the way, not the slightest trace has yet been discovered. This month's news regarding rubber stealing is even more sensational. It seems that a truck owned by Middleton Brothers, a well known trucking firm, on July 24 was engaged by the New York Commercial Co. to take 20 cases of fine Pará rubber from Pier 51 North river, to Pier 50 East river, whence it was to be shipped to the Easthampton Rubber Thread Co. The truck was in charge of a regular driver and a man who acted as an occasional helper. According to the story of the truckman, after having several drinks the regular driver suggested that they could easily get some money on the rubber that they had with them and they therefore chartered a wagon and, accompanied by three "gentlemen of leisure," whom the police inspector characterized as "bums," they proceeded to a junk shop owned by one Murphy at No. 39 Front street, Brooklyn, New York, where they sold the two cases, netting some 685 pounds of fine upriver pará, for \$6. In the meantime the assistant driver had been left with the truck and 18 cases of fine Pará, and, according to his story, he became nervous, and leaving the truck, horses, and rubber, fled. Very late at night, the police having been notified, the empty truck was found in Thirteenth street, Brooklyn, all the rubber having disappeared. It is estimated that the rubber at the present market price was worth \$6500. The loss in the present instance, unless the goods are recovered, will fall upon the truckmen. The two cases which went to the junk man have, through the promptness of the police, been secured.

#### MONARCH RUBBER AND OIL CLOTH CO.

THIS new company, at No. 41 North Seventh street, Philadelphia, issue a well arranged and nicely got up catalogue of a full line of Mechanical Rubber Goods, and also rubber carriage cloth, enameled oil cloth, table oil cloth, and linoleum, representing the products of high class factories. [4 $\frac{1}{4}$ " x 7 $\frac{1}{2}$ ". 64 pages.]—This company was incorporated September 1, 1902, under the laws of Pennsylvania; Francis Chapman is president and Edwin H. Chapman secretary and treasurer.

#### RUBBER WORKERS' UNIONS.

LOCAL No. 3, of the Amalgamated Rubber Workers' Union of America (Cambridge, Massachusetts), on July 17 installed these officers: John G. Sheehan, president; William Geaney, vice president; Henry Kolbe, recording secretary; Walter Dougherty, financial secretary; Florence Sullivan, treasurer; M. Lavender, guide; Miss Mary Foley, guard.

Local No. 4 (Trenton, New Jersey), now claiming 716 members, during the month elected new officers as follows: Jules Kohlenberger, president; Thomas Stanton, vice president; James O. Donovan, recording and corresponding secretary; Walter Sigley, financial secretary; J. O'Connell, treasurer; William Walker, trustee; J. W. Clothier, guide; John Philhouer, guardian.

#### "CONTINENTAL" TIRES IN AMERICA.

THE Continental Caoutchouc Co., the incorporation of which was reported in these pages last month, has been formed to promote the interests in the United States of the Continental Caoutchouc- und Guttapercha-Compagnie, important rubber

manufacturers, of Hanover, Germany. Offices have been opened at No. 298 Broadway, under the management of Emil Grossman, a dealer in automobiles and supplies. The officers are: Willy Tischbein, of the office in Hanover, president; Marcel Kahle and Joseph L. Kahle, importers, at No. 48 West Fourth street, New York, vice president and treasurer, respectively. The plans of the new company have not yet been announced. For instance, it is not known here whether the owners of the "Continental" tire will respect the "G and J" tire patents by taking out a license under them. Increased attention has been directed to the "Continental" automobile tires for the reason that they were used on the Mercedes automobile with which M. Jenatzy won the race for the Gordon Bennett challenge cup at Ballyshannon, Ireland, on July 2.

#### AFFAIRS OF THE EASTERN ELECTRIC CABLE CO.

IT will be remembered that early in April Judge Colt, of the United States circuit court, appointed Homer M. Daggett and Alfred W. Worthley receivers for the Eastern Electric Cable Co., manufacturers of insulated wire, at No. 61 Hampshire street, Roxbury, Massachusetts, on complaint of Henry A. Clark, claimed to be creditor to the extent of \$17,300, and an additional \$13,000 on account of endorsements on other obligations. This indebtedness was acknowledged by the company and the receivership assented to. The total indebtedness of the company was said to be about \$100,000, and it was thought to be to the advantage of the creditors to have the business continued. The company own some land near the factory which is assessed for \$12,100, or about 75 cents a foot. On this there is a \$10,000 mortgage with one year's interest due, and also one year's taxes. It is thought that this land will bring about \$1 a foot. In May Alfred W. Worthley, on petition, was given leave to tender his resignation as receiver, and Mr. Daggett is now the sole receiver. Mr. Henry A. Clark, founder of the business, was for some years a manufacturer of insulated wire with a plant in Bristol, Pennsylvania. He there invented a special reclaiming process and also an insulating compound which seemed to be of special value. Later he bought land in Roxbury, near the plant of the Boston Belting Co., and put up a plant for the manufacture of insulated wire, incorporating the Eastern Electric Cable Co., in which he was a large owner. The business for a time was exceedingly profitable, and "Clark wire" was well known throughout the United States. Mr. Clark is the inventor of many valuable processes and machines both in the line of rubber manufacture and outside of it, and it is prophesied that he will, before long, be able to put the business again on a substantial footing and settle with the creditors in full. The business at Roxbury was begun in 1885.

#### UNITED STATES RUBBER CO.

THE following is a summary of the trading on the New York Stock Exchange in the shares of this company since the date of the last report in these columns:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending June 20	950	13 $\frac{1}{2}$	13	2,743	51	50
Week ending June 27	300	13 $\frac{1}{2}$	13	700	50 $\frac{1}{2}$	50
Week ending July 3	360	13 $\frac{3}{4}$	13 $\frac{1}{2}$	540	50	40 $\frac{1}{2}$
Week ending July 11	845	13	12 $\frac{1}{4}$	515	49 $\frac{1}{2}$	49
Week ending July 18	2,300	12 $\frac{1}{4}$	11 $\frac{1}{2}$	1,065	48 $\frac{1}{2}$	48
Week ending July 25	4,700	12	9	5,535	48	31

#### AMERICAN TUBING AND WEBBING CO. (PROVIDENCE, R. I.).

So far as can be learned no change in the affairs of this company has resulted from the bankruptcy of Dresser & Co. (New York). The factory is being run full time, and the officers

state that the business is in a prosperous condition. Among the creditors of Dresser & Co. who have asked leave of the United States district court to join in the petition in bankruptcy is the Manufacturers' Trust Co., of Providence, which holds an assigned claim of the Tubing and Webbing company for \$29,112. The company's product consists of flexible tubing for gas stoves, drop lights, etc., elastic webbing for suspenders, garters, and the like, of both silk and cotton weaves, hat elastic, elastic braids to order, and similar products. The company are not consumers of crude rubber, but large purchasers of rubber thread.

#### RUBBER GOODS MANUFACTURING CO.

It is understood that the company's total sales for the first six months of 1903 amounted to about \$9,000,000, while the largest sales in any entire previous year had been only \$14,000,000. This was in spite of the loss of one of the company's factories by fire in March, and the fact that a strike existed in two other factories at the beginning of the year. It is understood also that the litigation in which the company has been engaged for some time is about to be settled satisfactorily. The quarterly dividend of 1½ per cent. on the preferred stock, on July 16, represented a disbursement of \$140,899.50. —During the past month the quotations for the company's shares, on the New York Stock Exchange, were the lowest of the year, but this decline was simultaneous with a "slump" in all listed securities, the reason for which remains to be learned. The lowest prices for the month, however—until after the Taylor failure on July 24—were still several points above the lowest prices in 1902, when sales of preferred were made at 63 and common at 17½. The record for a month past follows:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending June 20	310	23 1/4	23 1/2	300	77 1/2	77 5/8
Week ending June 27	1,500	23 1/4	22 1/4	200	77 1/2	77
Week ending July 3	800	23 1/2	22 1/4	500	77 1/2	76
Week ending July 11	1,130	22 1/2	21	720	79 1/2	76
Week ending July 18	3,630	21 1/2	20 1/4	500	75 1/2	74 1/4
Week ending July 25	23,075	21	12	5,238	75	60

Apparently the company will be affected in no way by the assignment, reported on July 24, of the important stock brokerage firm of Talbot J. Taylor & Co. (New York), although the head of the firm as first vice president, and his partner and brother, James B. Taylor, is treasurer of the company. Talbot J. Taylor is the son in law of James R. Keene, whose holdings of Rubber Goods shares were sufficient to enable Taylor & Co., in 1902, to control the organization of the company. Taylor & Co. have been credited with immense speculative deals in railway shares, the failure of which forced their suspension. Though the failure was one of the largest in recent Wall street annals, it did not precipitate a panic, but instead was followed by a general rise in stocks, the explanation being that the market had become depressed in part through rumors of the weakness of some important brokerage firm, and when the Taylor assignment came, an element of uncertainty was removed. Charles H. Dale, president of the Rubber Goods Manufacturing Co., said:

"The failure of Talbot J. Taylor & Co. will have absolutely no effect on this company. The company was never in a more flourishing condition. We owe nobody and nobody owes us, except in the trade circles, and there is money in the treasury. Talbot J. Taylor & Co. do not own a controlling share of the stock of this company, as a matter of record. Of course, as stock brokers I do not know how much stock they carried belonging to others. Talbot J. Taylor & Co. handled proxies

around elections of the company and had a lot to do with the reorganization of the company, but the failure won't touch us."

It is currently reported in Wall street that all but one of the financial institutions holding collateral for loans made to Talbot J. Taylor & Co. agreed to wait a reasonable time before marketing it. The one firm, however, threw upon the market on the morning following the failure, all its Taylor collateral, including large blocks of Rubber Goods stocks, and this action explains the heavy decline in these issues noted in the above table. The selling of Rubber Goods shares on July 25 was as follows:

PREFERRED.		PREFERRED.		COMMON.	
Shares.	Shares.	Shares.	Shares.	Shares.	Shares.
1100	60	100	63	100	13 1/4
200	63	COMMON.		100	13 1/4
1100	60	Shares.		100	13 1/4
200	51	7000	12	400	13 1/4
500	60	2000	12 1/2	300	13 1/4
400	61	300	12 3/4	200	13 1/4
100	60 1/2	3000	12	200	13 1/4
50	61	100	12 3/4	100	13 1/4
100	61 1/2	200	13	100	13 1/4
33	61	200	13 1/4	1100	13
45	61 1/2	100	13 1/4	10	11 1/8
300	61	400	13	100	13

Later in the month Preferred shares sold up to 68 and Common to 14.

#### NEW INCORPORATIONS.

✓ THE India Rubber Co. of New Jersey, July 1, 1903, under New Jersey laws, to manufacture India-rubber goods; capital, \$500,000. Incorporators: Kenneth K. McLaren, Joseph M. Mitchell, L. B. Dailey, H. O. Coughlan, W. N. Akers, B. B. Lewis, and Oscar N. Coohcan. Registered office in New Jersey: Corporation Trust Co., No. 15 Exchange place, Jersey City. This is the company referred to in the last INDIA RUBBER WORLD as being formed under the control of the Rubber Goods Manufacturing Co., to operate a factory owned by the latter at New Brunswick, N. J., and to succeed to the business of the India Rubber Co. of Akron, Ohio. There has not yet been an election of officers.

✓=The Dayton Rubber Manufacturing Co., July 7, 1903, under New Jersey laws, to manufacture mechanical goods at Dayton, Ohio; capital \$250,000, of which \$100,000 is 8 per cent. cumulative preferred stock, and \$150,000 in common stock. Incorporators: W. S. Huffman, Boston, Mass.; Harrie N. Reynolds and Oscar F. Davidson, Dayton, Ohio; William H. Speer, Jersey City, N. J. Mr. Huffman is widely known in connection with the sale of rubber vehicle tires, in which business he has been engaged for ten years, besides which he is the patentee of a new rubber tire.

✓=The Foster Rubber Co. (Boston), July 21, 1903, under Maine laws, to deal in rubber goods; capital, \$100,000, in shares of \$25. Frederick J. Morrison, president; Daniel S. Pratt, treasurer. Offices: No. 370 Atlantic avenue, Boston. Organized to buy and control the Foster patents on improved rubber treads, being the "friction plug" as applied to rubber heels and soles, heels of rubber boots, crutch and cane tips, automobile tires, horseshoe pads, and rubber mats and matting. The Elastic Tip Co. (Boston) will be the company's selling agents on rubber heels and soles and crutch tips.

✓=Pettie Tire Co., July 9, 1903, under New York laws; to manufacture rubber tires; capital, \$50,000. Incorporators: Edwin H. Ensell, William H. Connell, Emma C. Pettie, all of Brooklyn, New York.

✓=Randolph Rubber Manufacturing Co. (No. 620 Atlantic avenue, Boston), incorporated under the laws of the District of Columbia; authorized capital, \$1,000,000. The object is to acquire a factory and make rubber goods generally, but the inten-

tion at first is to make a specialty of the new "Staple Lock" rubber heel, patented by Henry F. Rooney, of Randolph, Mass. (Patent No. 726,464, issued April 28, 1903.) Negotiations are under way for a factory at Randolph.

=Blackstone Webbing Co. (Pawtucket, Rhode Island), June 23, 1903, under Rhode Island laws, to manufacture textile and rubber fabrics; capital, \$100,000, of which \$50,000 each in preferred and common stock. Incorporators: Eaton Cliff, Louis W. Bishop, and Joseph L. Bodell.

#### TRADE NEWS NOTES.

THE New York Insulated Wire Co. have awarded a contract for the erection of an additional brick building at their factory at Wallingford, Connecticut—formerly the Metropolitan Rubber Co. plant—100×60 feet, four stories high, and basement. The cost is reported at \$25,000.

=A contract for supplying fire hose to the city of Baltimore was awarded recently to the Boston Woven Hose and Rubber Co., in consequence of a report by the chief engineer of the fire department on the good service obtained from hose bought from the same company in 1901 and still in use.

=The Campbell Shoe Co. (Quebec, Ontario) received recently the first of four carloads of rubber boots and shoes to be shipped to them this season by The Maple Leaf Rubber Co., Limited (Toronto). Their order includes more pairs of rubbers than there are inhabitants in Quebec.

=The Hood Rubber Co. now have 2300 employés at work in their factory (East Watertown, Mass.), turning out 30,000 pairs of rubber boots and shoes daily. About 300,000 square feet of floor space are utilized.

=At the adjourned annual meeting of the American Rubber Co. (Boston, July 6) the board was continued in office without change—William R. Dupee, Samuel P. Colt, Harry E. Converse, Lester Leland, and Costello C. Converse—and Mr. Dupee was reelected president and George P. Eustis treasurer and clerk.

=The S. H. & M. Co. (Cleveland, Ohio), having decided to go into the manufacture of dress shields, have purchased the business of the Brooklyn Rubber Co. (Brooklyn, New York.)

=The Empire Rubber Manufacturing Co. (Trenton, N. J.) have established a department for the manufacture of high grade enameled cloth for carriage tops, which they are selling in connection with their regular line of carriage cloth.

=The recent flood at Jeannette, Pa., although disastrous to many enterprises, did little harm to the new plant of the Pennsylvania Rubber Co. The water rose about an inch above the main floor of their plant, but quickly subsided, and what little damage was done was easily repaired.

=The Peerless Rubber Manufacturing Co. (New York) issue a circular embracing a photographic reproduction of a piece of "Peerless" packing after use for five months at 80 pounds steam pressure, showing a surprising degree of durability. Also, a letter from the Diamond Soda Works (Milwaukee, Wisconsin), stating that "Peerless" packing would last in a certain trying position 8 to 10 days, whereas no other packing used under the same circumstances had lasted more than one day.

=A. G. Burt becomes manager of the Standard Rubber Shoe Co. (Chicago), succeeding F. O. Ketterling, whose death was reported in the last INDIA RUBBER WORLD, and whose assistant he had been for several years.

=The Beacon Falls Rubber Shoe Co. (Beacon Falls, Conn.) closed for only a day in connection with the Fourth of July, instead of giving a week's summer vacation. They are about to erect an additional building for the storage of stock.

=A legal controversy is in progress over a dam erected by the Newton Rubber Co. in the Charles river, at Newtown, Mass-

sachusetts. The local park commission acquired by right of eminent domain a tract of land, through which a branch of the river flows, and filled in a portion of the river. The rubber company claimed that this interfered with their water rights, and impounded the water in a dam. The company also filed a suit to compel the restoration of their alleged rights. The state has now brought an action against the Newton Rubber Co. and the City of Newton for interfering with the flow of the river.

=H. E. Pierce, secretary of the Warren Rubber Co., a jobbing house at Warren, Ohio, since their incorporation in May, 1897, and in charge of their office, has resigned to engage in another business.

=The Maynard Shoe Co. (Claremont, New Hampshire) are sending out to present and prospective customers a neat and convenient paper cutter, or 'etter opener, lettered with a reference to their new product—tennis shoes.

=The Hayes Manufacturing Co. (Natick, Mass.) have gone into the manufacture of golf balls. Mr. Hayes will be remembered as having been for years connected with the rubber business, at one time manufacturing a line of white reclaimed rubber.

=The Granby Rubber Co. (Montreal) have purchased the plant of the Granby Last Co. (in liquidation) at Granby, and are thus in a position to make their own lasts for rubber boots and shoes.

=At Montreal, on June 30, Mr. Justice Fortin granted the petition of John Stock, accountant, of Lachine, for an order to wind up the affairs of the Strathcona Rubber Co., of Montreal, of which E. L. Rosenthal is president. J. McD. Hains was appointed provisional liquidator. The Strathcona company was incorporated in August, 1901, to manufacture waterproof clothing and established a rubber factory.

=The Wolsley Rubber Co. are a new firm in the manufacture of waterproof garments in Montreal, in Notre Dame street, headed by Mr. Wolsley, formerly of The Canadian Waterproof Co.

=According to *The Clothier and Haberdasher*, of Montreal, an important English firm who have long been selling waterproof garments in Canada, have determined to establish a branch for their manufacture in Montreal. The description of the firm fits the Messrs. Frankenburg, of Manchester, the visit of whose head to America was mentioned in the last INDIA RUBBER WORLD.

=Mr. George H. Gibson has resigned as manager of the advertising and publication department of the B. F. Sturtevant Co. (Boston), to accept an appointment with the International Steam Pump Co., having offices at Nos. 114-118 Liberty street, New York. Mr. Gibson was formerly connected with the Westinghouse companies' publishing department, of Pittsburgh, Pa., and was for two years a member of the editorial staff of the *Engineering News* (New York).

=Business has been so brisk at the factories of the Boston Rubber Shoe Co. that they are contemplating not giving the annual August vacation this year.

=The factory of the Preston Hose and Tire Co. (Marlboro, Massachusetts) is reported again in full operation.

=The American Hard Rubber Co. have filed plans with the building department for an additional three story brick building, of fireproof construction, at their College Point factory.

=The Wisconsin Rubber Co. was incorporated July 15, under Wisconsin laws, to develop Mexican property; capital \$60,000. Incorporators: Rasmus B. Anderson, Charles H. Hall, Samuel W. Merrick, F. C. Hudson, E. F. Carpenter—of Madison, Wisconsin.

=A certificate has been filed with the secretary of state of Connecticut reducing the capital stock of the Bridgeport Elastic Web Co. from \$100,000 to \$2000. This company was merged into a Massachusetts corporation some two years ago, since which time the work formerly done by it has been consolidated at Boston.

✓ =The Springfield Tire and Rubber Co. (Springfield, Ohio) have added a large three roll calender and hydraulic press to their plant, and in addition to their regular line of mold work have taken on the manufacture of mats and matting.

=Type & King, whose specialties for rubber manufacturers the world over are so well known, have removed their London office from 47, Wilson street, to 16, Mincing lane.

=The July 22 issue of the *Boot and Shoe Recorder* as a "Rubber number" is the most interesting copy of that live weekly that has appeared in a long time. Editor Putnam has massed a lot of information, illustration, and incidentally good advertising that makes a fine total. One question, however, occurs to the writer: What happened to the many kodak pictures that he apparently took at the recent New England Rubber Club outing? Wasn't the box loaded, after all?

=P. W. Saunders, of North Waterford, Maine, former post master of that town, has been engaged by the Lowell Rubber Co. (Lowell, Mass.), one of the oldest wholesale and retail rubber stores in New England, to take charge of their business.

#### PERSONAL MENTION.

WILLIAM G. HILL, who died at his home in Malden, Massachusetts, on July 10, in his fifty-third year, was a nephew of the Hon. Elisha S. Converse, being a son of an elder sister of the latter—Sarah Converse [1811-1850], who married James Hill, of Thompson, Connecticut. Mr. Hill had been, since 1853, connected with the leather trade in Boston. He is survived by his wife (now Thompson, of Richmond, Virginia) and two sons, the elder of whom, William G. Hill, Jr., is the transportation agent of the Boston Rubber Shoe Co.

=Mr. John P. Lyons, advertising manager of the United States Rubber Co. accompanied by Mrs. Lyons, sailed from Boston on July 9 for Europe, on a vacation of four weeks, most of which will be spent on the water. Mr. Lyons has made a record for himself with the United States company as a brilliant and tireless worker—indeed, he has always been an overworker. It is therefore the hope of all that the rest which he has so richly earned may do him much good.

=Mr. James A. Braden, hitherto correspondent at Akron, Ohio, for THE INDIA RUBBER WORLD, and connected in an important way with Akron journalism, has retired from his various positions to become advertising manager for the Diamond Rubber Co. On the evening of June 27 a complimentary dinner was tendered to Mr. Braden at the Empire House, in Akron, by a number of local newspapermen, who, while regretting his retirement from journalism, wished him every success in his new field.

=Mr. Joseph Thomas Hart and Miss Margaret Annie Stewart were married on June 24, in Montreal, at the Erskine Presbyterian church, by the pastor, the Rev. A. J. Mowat. Mr. Hart is superintendent of the boot and shoe department of the Canadian Rubber Co. of Montreal, the employés of which company joined in making a handsome wedding present, which was tendered at the reception, held at Stanley Hall, in a speech by Mr. A. D. Thornton, superintendent of the mechanical department. The wedding journey included Niagara Falls, Buffalo, N. Y., and Williamsport, Pa., Mr. and Mrs. Hart visiting relatives and friends.

=Mr. Ira Walton Henry, the electrical engineer of The Safety Insulated Wire and Cable Co. (New York), accompa-

ied by his family, lately returned from an absence in Europe of several weeks, during which he attended several technical meetings and inspected a number of new electrical installations of interest.

=The will of the late Charles Albert Hoyt, a director in the American Hard Rubber Co., who died on April 18, leaves to his widow their house at No. 15 Pierrepont street, Brooklyn, together with a large sum of money. The son, Dr. Albert Sherman Hoyt, is also well provided for. There are seventeen specific legacies, amounting to \$29,500, mostly to Roman Catholic charitable institutions.

=The marriage is reported, at Stockholm, Sweden, of Mr. R. M. Howison, European agent for the Pennsylvania Rubber Co., with offices in London, and Miss Madeleine, daughter of Charles de Lacy MacCarthy, M. B., B. A. Mr. Howison will be pleasantly remembered by many who knew him in the rubber trade in Boston and Hartford, some years ago.

=The Editor of THE INDIA RUBBER WORLD is in receipt of a beautiful specimen of Japanese woodcut printing, the invention of the famous water color artist, Mr. K. Miyake. The picture shows twenty-eight shades of color and is a marvelously artistic piece of work. The recipient becomes its possessor through the kindness of Mr. Kenzo Okada, now a rubber manufacturer in Japan, but formerly employed in rubber factories in the United States.

=Mr. C. J. Bailey, of No. 22 Boylston street, Boston, will spend the month of August at the beautiful summer resort known as "Casco Castle," South Freeport, Maine.

=Mr. Eben H. Paine, sales manager of the United States Rubber Co., is utilizing the hot months by taking a trip to Europe.

=Mr. William C. Coleman, who is well known in the rubber trade, was married on July 18, to Miss Winona Taylor. Mr. and Mrs. Coleman will be at home at "The Highlands," Ninety-first street, New York, after September 1.

=Mr. Ernest Baldwin, New York manager for the Voorhees Rubber Manufacturing Co. (Jersey City), is a member of the Essex Troop of the New Jersey National Guard, and joined his regiment in the annual encampment at Seagirt during the latter part of July. The camp was favored with an inspection by Mr. Root, secretary of war of the United States.

#### RUBBER NOTES FROM THE AMAZON.

TO THE EDITOR OF THE INDIA RUBBER WORLD: It usually is taken for granted here that heating the *latex* before smoking injures the quality of the rubber. In 1873, when this method was first introduced, the Pará rubber houses—Manáos did not then exist—especially Singlehurst & Co., sent representatives up country, asking the *seringueiros* not to adopt it. Nowadays, however, when only greenhorns smoke cold rubber milk, little is said about the practice. There can be no doubt that heating the milk hastens the effect of the cure by smoking, but whether it does or does not injure the rubber, I cannot say; I think, however, that it does. I will try to obtain samples of cold and hot smoked rubber, and send to the United States for comparison.

You may be interested in hearing of the enormous yield of a rubber tree (*Hevea Brasiliensis*) in Murumurutuba, on the river Madeira. It was discovered by an old man nearly three years ago, since which time it has been tapped regularly 90 days in the year—25 days in the month during the season—yielding an average of 2 liters of *latex* per day. This would give a total of 180 liters [=190 quarts] per year. L. G.

Manáos, Brazil, May 7, 1903.

## INDIA-RUBBER INTERESTS IN EUROPE.

## THE SUBMARINE CABLE INDUSTRY IN GERMANY.

THE business report of the Norddeutsche Seekabelwerke, Aktie gesellschaft, for 1902, presented at the recent annual meeting at Cologne, indicates that the new industry in Germany which this company was formed to inaugurate, already is attaining important proportions. The first cable of the Deutsch-Atlantische Telegraphen-Gesellschaft—laid in 1900 from Borkum, Germany, to New York—it will be remembered, was made in England, no facilities then existing for cable manufacture in Germany. On May 31, 1902, a contract was signed for a duplicate cable to New York, to be made by the Norddeutsche company, at the factory it had established at Nordenham, and the manufacture was begun in July. Before the end of 1902 more than 1800 kilometers had been completed and accepted, and up to April of this year 3000 kilometers had been completed, the laying of which was commenced on May 16. For the laying of this cable, and the section yet to be made, an order was given in March 1902, to the "Vulkan" shipyards, at Stettin, for the first vessel to be built in Germany expressly for cable laying. This vessel, designed for carrying 5000 tons of deep sea cable, and named the *Stephan*, was delivered to the Norddeutsche company in March of this year. During the early months of 1902 several small orders were taken by the company, including a three-conductor light cable between Wanderoog and Rothe Sand lighthouse, and the company's first cable ship, *von Podbielski* was occupied 184 days during the year in laying these cables and completing the survey for the duplicate cable to New York. Other important orders are now in hand. In June, 1902, the share capital was increased from 4,000,000 to 6,000,000 marks, fully paid. The profit and loss account for the year shows a surplus of 94,241.55 marks; no dividend was distributed. The assets of the company are reported at 15,695,209 marks. The board includes Max Guilleaume and Emil Guilleaume, of the firm of Felten & Guilleaume, and Franz Clouth, of the Rheinische Gummiwarenfabrik (Cologne).

The German Atlantic cable now in operation, and owned by practically the same interests, has had two years of profitable business, and satisfactory dividends have been paid.

## A RUBBER TRUST IN AUSTRIA?

THE Prague *Tageblatt* contains the following singular news, which should be considered cautiously: "It has been reported for some time that the Austrian rubber manufacturers had decided on a 10 per cent. advance on rubber goods. This advance has not gone into effect because one factory did not abide by the decision. Prices therefore have remained unchanged. The efforts of the rubber manufacturers to organize proceed uninterruptedly, but in a dragging manner. According to the present status a combination is not thought of, but it is intended to form the factories into a trust, as has been done in the fez and glue industries. A short time ago a meeting was held at which the formal proceedings were considered. The factories are called upon to furnish statistics giving the average production and sales of the past years, net profits, etc., in order to strike a basis as to how much capital would be required and what factories are to be operated. The financial end is likely to be looked after by the Vienna Bankverein, several German banking houses being also interested." We very much doubt whether the Austrian rubber industry, which is suffering severely from enormous overproduction, could be benefited by being

formed into a trust, or that the principal factories are unable to see the danger lying in such action—strengthening the weak at the expense of the stronger. Most likely it is only a probing instigated by certain interested banking houses.—*Gummit-Zeitung*.

## RUBBER THREAD IN GERMANY.

AT the yearly general meeting of the Central Society of German Rubber Goods Factories, on June 4, the business report submitted stated that the imperial statistical bureau had been petitioned to report specifically on the imports and exports of rubber threads. The existing classification of rubber threads with rubber sheets and solutions (including Gutta-percha) has proved unsatisfactory, particularly as it has tended to prevent the placing of an adequate import duty upon threads. The president of the statistical bureau had replied, under date of May 13, that in future rubber threads would receive special mention, a classification of them having been made under No. 573 in the new customs tariff.

## ENGLISH HOT WATER BOTTLES.

AT the recent annual chemists' exhibition, in London, Messrs. Currie, Thompson & Co. (36, Ludgate Hill, London) showed hot water bottles, guaranteed for two years against bursting or leaking.—In the April issue of THE INDIA RUBBER WORLD was reported the trial, in Liverpool, of an action at law for damages brought against a chemist in that city by a customer who had suffered from the bursting of a hot water bottle sold by him. The case was decided in favor of the plaintiff, after which the chemist brought an appeal, which now also has been decided against him.

## RAILWAY ENTERPRISE IN AFRICA.

THE Benguela Railway Co. has been registered in Lisbon, to give effect to the concession granted by Portugal for a railway through Portuguese West Africa to Lake Tanganyika, to Robert Williams, a British subject [see THE INDIA RUBBER WORLD, February 1, 1903—page 153]. The requisite capital, £2,000,000, has been underwritten in London. Meanwhile the inauguration of work on the road has occurred, the first spike having been driven by the governor general of Angola. While the primary object of the projected road is the opening up of mines in the Tanganyika region, it will also promote the exploitation of rubber in districts—both in Angola and the Congo Free State—now accessible only by portage.

## GREAT BRITAIN.

GOODRICH solid motor cars are now offered by J. W. & T. Connolly, Limited, King's Cross, N., London who have made a specialty for several years past of solid rubber tires for vehicles.

=A company under the style P. Frankenstein & Sons, Limited, with £50,000 capital, has been registered to acquire the business of P. Frankenstein & Sons, manufacturers of India-rubber and waterproof goods and leather goods, at the Victoria Rubber Works, Newton Heath, Lancashire, and the Arkwright Mills, Manchester. No public issue.

=W. T. Henley's Telegraph Works Co., Limited, on account of having become cramped for space by reason of the growth of their cables and mechanical rubber business at their works in Woolwich, where 1500 hands are employed, have purchased 12 acres of ground at Rosherville, Gravesend, down the Thames, on which it is proposed to erect additional works, to which

will be transferred at first the manufacture of underground and telephone cables. It is stated that the company were obliged to get outside the London district for their works, for the Metropolitan building act did not permit the erection of workshops large enough to carry on the company's work in the most economical manner. The new works will be built principally of iron and glass, on the American principle.

Late advices from Liverpool state that Mr. Albert B. Bussweiler, of the firm of Symington, Bussweiler & Co. has withdrawn, having associated with himself Mr. Arthur Meyer, at one time a partner in the firm of Reimers & Meyer (New York), and will take up the business of importing crude rubber.

=Capon Heaton & Co., Limited, is the style of a new company, with £50,000 capital, registered to acquire and continue the business of the Tubeless Pneumatic Tyre and Capon Heaton, Limited (in liquidation), manufacturers of tires and mechanical rubber goods, at Birmingham. No public issue.

#### GERMANY.

Two brands of American made dress shields (*schweissblätter* in German) are being advertised extensively throughout Germany in all the journals likely to reach the eyes of feminine readers.

### REVIEW OF THE CRUDE RUBBER MARKET.

RUBBER is again nearing a basis of a dollar a pound for fine Pará, the market having steadily advanced during the month, and now showing much firmness. Conditions to be considered in predicting the course of the market are that visible supplies of rubber of all sorts are smaller than for a long time past; that the last Pará crop equalled the figures for the preceding year only by including increased receipts of Caicho; that it will be some time yet before the new crop can be availed of to a large extent; that African supplies continue on a reduced scale; and that consumption everywhere is at a liberal rate. Imports into the United States for three fiscal years (ending June 30) have been:

	1900-01.	1901-02.	1902-03.
Pounds.....	55,275,529	50,413,481	54,997,491
Import value.....	\$28,455,383	\$24,899,230	\$30,429,401
Average per lb.....	51.5 cts.	49.4 cts.	55.3 cts.
Fine old Pará Aug. 1.....	85@86	74@75	98@99

Following is a statement of prices of Pará grades, one year ago, on January 1 last, and on July 30—the current date:

PARA.	Aug. 1, '02.	Jan. 1, '03.	July 30.
Islands, fine, new.....	66@67	88@89	89@90
Islands, fine, old.....	71@72	91@92	93@94
Upriver, fine, new.....	69@70	90@91	94@95
Upriver, fine, old.....	74@75	95@96	98@99
Islands, coarse, new.....	44@45	60@61	57@58
Islands, coarse, old.....	@@	@@	@@
Upriver, coarse, new.....	55@56	73@74	75@76
Upriver, coarse, old.....	@@	@@	@@
Caicho (Peruvian) sheet.....	47@48	59@60	59@60
Caicho (Peruvian) ball.....	51@52	69@70	71@72

The market for other sorts in New York, in which there likewise is an advance to be noted this month, is as follows:

AFRICAN.	Ikelemba.....	83 @84
Sierra Leone, 1st quality	83 @84	Madagascar, pinky....79 @80
Massai, red.....	83 @84	CENTRALS.
Benguela.....	68 @69	Esmeralda, sausage....70 @71
Cameroon ball.....	61 @62	Guayaquil, strip....63 @64
Gaboon flake.....	41 @42	Nicaragua, scrap....68 @69
Gaboon lump.....	44 @45	Panama, slab....56 @57
Niger paste.....	12 @19	Mexican, scrap....68 @69
Accra flake.....	21 @22	Mexican, slab....56 @57
Accra buttons.....	59 @60	Mangabeira, sheet....53 @54
Accra strips.....	62 @63	EAST INDIAN.
Lopori ball, prime.....	82 @83	Assam.....
Lopori strip, do.....	79 @80	82@83

=Fire occurred on the evening of July 4 in one of the buildings of the factory of the Actiengesellschaft Metzeler & Co. (Munich), which was consumed together with rubber and other supplies, but the energetic efforts of the firemen saved the other buildings. The loss is covered by insurance, and there will be no interruption of business.

=Felten & Guilleaume, Carlswerk, Actiengesellschaft (Mülheim a. Rhein) report net profits during their last business year of 2,443,072 marks [= \$581,451.14], against 561,472 marks for the preceding year. The dividend is 5 per cent., against no dividend in the year before.

#### RUSSIA.

THE Russian-American India-Rubber Co. (St. Petersburg) are the company referred to in the last INDIA RUBBER WORLD as having acquired the rights in Russia to manufacture the Swinehart side wire solid rubber tire for vehicles, under contract with the parties at Akron, Ohio, owning the patents.

=The board of directors of the Russian-French Rubber Co. —"Prowodnik," now consists of Paul A. Schwartz, Th. Henri Schwartz, Wilhelm Vajen, Jacob Erhardt, and Balthazar Herberz; and B. W. Wittenberg and Gustav V. Schöppf, "director candidates."

#### Late Pará cables quote:

	Per Kilo.	Per Kilo.
Islands, fine .....	5\$075	Upriver, fine..... 6\$400
Islands, coarse .....	3\$075	Upriver, coarse..... 4\$700
Exchange, 12 $\frac{1}{2}$ d.		

#### Last Manáos advices:

	Upriver, fine.....	Upriver, coarse.....	Exchange, 12 $\frac{1}{2}$ d.
	6\$450	4\$550	

Pará advices report that lately the market there has become more active than for some time past, the better demand having caused considerable firmness and an advancing tendency in prices. The total receipts for the crop year showed a decline, as compared with the preceding year, of less than one-half of 1 per cent., which is more favorable than could have been hoped for during the existence of the troubles in the Acre district and the stoppage of the Bolivian transit. The Acre region, by the way, is still upset in places by the activity of Brazilian revolutionists.

#### Statistics of Para Rubber (Excluding Caicho).

	NEW YORK.		
	Fine and Medium.	Coarse.	Total
Stocks, May 31.....tons	472	69 =	541
Arrivals, June .....	419	233 =	652
Aggregating.....	801	302 =	1193
Deliveries, June .....	666	220 =	826
Stocks, June 30.....	285	82 =	367
	=	=	=
PARÁ.			ENGLAND.
Stocks, May 31.....tons	115	80	1901.
Arrivals, June .....	1770	1240	1400
Aggregating.....	1885	1320	2075
Deliveries, June .....	1770	1255	1350
Stocks, June 30...	115	65	886
	=	=	=
PARÁ.			ENGLAND.
Stocks, May 31.....tons	115	80	1901.
Arrivals, June .....	1770	1240	1400
Aggregating.....	1885	1320	2075
Deliveries, June .....	1770	1255	1350
Stocks, June 30...	115	65	886
	=	=	=
World's supply, June 30.....tons	2712	3272	2760
Pará receipts, July 1 to June 30.....	26,546	26,456	23,437
Pará receipts of Caicho, same dates .....	4154	3514	4203
Afloat from Pará to United States, June 30...	495	284	359
Afloat from Pará to Europe, June 30.....	415	367	460

**Rubber Scrap Prices.**

NEW YORK quotations—prices paid by consumers for carload lots—are again slightly lower, as follows:

Old Rubber Boots and Shoes—Domestic.....	65 $\frac{1}{2}$ @ 6 $\frac{1}{4}$
Do Foreign.....	5 $\frac{1}{2}$ @ 6
Pneumatic Bicycle Tires.....	4 @ 4 $\frac{1}{2}$
Solid Rubber Wagon and Carriage Tires.....	7
White Trimmed Rubber.....	9 $\frac{1}{4}$ @ 9 $\frac{1}{2}$
Heavy Black Rubber.....	4 $\frac{1}{4}$
Air Brake Hose.....	2 $\frac{1}{2}$ @ 3
Fire and Large Hose.....	2 $\frac{1}{2}$
Garden Hose.....	1 $\frac{1}{2}$
Matting.....	1

The market appears likely to remain unchanged during the remainder of the summer.

**Hamburg.**

TRAUN, STÜRKEN & CO. have taken over the business carried on under the name B. Soller Kautschuk-Import-Gesellschaft m. b. H., together with the African branches, known as Prins & Stürken. Senator Dr. Traun and Herr Alfred Stürken are the principal members of the new firm, and Herr Paul Fischer, who will liquidate the firm of B. Soller, has been given procuration.

**Rubber Receipts at Manaos.**

DURING June, 1903, and for the twelve months of the three past crop seasons [by courtesy of Messrs. Witt & Co.]:

FROM—	JUNE.			JULY-JUNE.		
	1903.	1902.	1901.	1903.	1902.	1901.
Rio Purus.....	26	77	85	5938	6750	6016
Rio Madeira.....	57	88	141	2306	2844	2694
Rio Jurus.....	48	54	43	3608	3642	2925
Rio Javary—Iquitos.....	5	3	7	1507	1304	1246
Rio Solimões.....	8	21	11	1372	1551	1183
Rio Negro.....	104	14	13	755	383	521
Total.....	248	257	300	15486	16474	14585
Caucho.....	258	200	167	3612	3485	3786
Total.....	506	457	467	19098	19599	18371

**London.**

EDWARD TILL & CO. [July 1] report stocks:

LONDON	Pará sorts.....	tons	1903.	1902.	1901.
			1903.	1902.	1901.
Borneo.....		19	122	160	
Assam and Rangoon.....		7	10	52	
Other sorts.....		198	428	530	
Total.....		224	560	742	
LIVERPOOL	Pará.....	1328	2051	1034	
	Other sorts.....	733	984	1352	
Total, United Kingdom.....		2235	3595	3128	
Total, June 1.....		2248	3687	3502	
Total, May 1.....		2539	3788	3597	
Total, April 1.....		2525	3326	3522	
Total, March 1.....		1939	3078	2989	
Total, February 1.....		1921	2674	3129	
Total, January 1.....		1582	2794	2901	

**PRICES PAID DURING JUNE.**

	1903.	1902.	1901.
Pará fine, hard.....	3/10 @4/ 1 $\frac{1}{2}$ 2/11 $\frac{1}{2}$ 1/2@2/11 $\frac{1}{2}$	3/8 @3/ 9	
Do soft.....	3/ 8 $\frac{1}{2}$ @3/10	3/8 @3/8 $\frac{1}{2}$	
Neroheads, scrappy.....	2/11 $\frac{1}{2}$ @3/—	2/4 @2/ 4 $\frac{1}{2}$	2/ 7 $\frac{1}{2}$
Do Islands.....	2/ 4 @2/ 5	1/11 2/14 @2/ 2 $\frac{1}{2}$	
Bolivian.....	No sales.	3/- @3/ 0 $\frac{1}{2}$	No sales.

JULY 17.—The market for Pará has been strong, active, and dearer, and considerable business has been done, largely for American account, closing firm. Sales include Madeira spot at 4s. @ 4s. 0 $\frac{1}{4}$ d. and fine old Bolivian 4s. 1d. and buyers. Negroheads continue scarce; scrappy sold at 3s. 1 $\frac{1}{2}$ d. Camelás at 2s. 6d. @ 2s. 6 $\frac{1}{4}$ d. and Islands at 2s. 5d. There are no auctions this week. Stocks are very much reduced and good medium kinds are scarce, and dearer.

**Liverpool.**

WILLIAM WRIGHT & CO. report [July 1]:

*Fine Para.*—The market during the early part of the month was quiet, with little business passing; at the close, however, a good demand has sprung up, and prices have improved fully 1d. per pound. What we have all along maintained is now about taking place, and that is that America would come into this market to buy her surplus requirements, and we look for a decided advance in prices next month. Manufacturers have more or less kept out of the market, believing that prices would react, but the situation is too strong, in our opinion, to allow any serious reaction. The crop is now finished and shows a shortage in Pará grades of about 740 tons, and an increase in Peruvian grades of about 510 tons. Stocks are small and well held, and deliveries good; therefore everything points to a further advance shortly.

EDMUND SCHLÜTER & CO. report Liverpool stocks:

	May 31.	June 30.		May 31.	June 30.
Pará—1st hands.....	905	856 tons.	Peruvians.....	243	273 tons.
Fine.....	738	648 "	Africans.....	330	371 "
Medium.....	86	103 "	Mollendo.....	161	358 pkg.
Neroheads.....	81	105 "	Mangabeira.....	91	88 "
Pará—2d hands.....	497	472 "	Pernambuco.....	18	18 "
Fine.....	460	445 "	Manicoba.....	242	59 tons.
Medium.....	18	9 "	Ceará.....	26	13 pkg.
Neroheads.....	19	18 "	Assare.....	46	41 "
Total Pará.....	1402	1328 "	[*Packages.]		

JULY 15.—There is good inquiry for Pará sorts, partly from America, and there has been a further small advance to 4s. for new spot and August-September hard fine, at which price there would be buyers at the close. For two months old hard 4s. 0 $\frac{1}{4}$ d. was paid and 4s. 2d. is asked for 1 $\frac{1}{4}$  to 2 years old. Soft fine spot 3s. 10 $\frac{1}{2}$ d.; August-September 3s. 10 $\frac{1}{2}$ d. paid. Entrefine scarce and wanted; value 3s. 10d. for hard. African rubbers scarce and very firm. To day's auctions were unimportant and passed off without much life. Little desirable rubber was offered.

**Bordeaux.**

R. HENRY reports [July 6] an active demand, with business somewhat restricted for want of stocks. One lot of Mayumba (French Congo) rubber, of 3500 kilos, appeared among the sales. Arrivals for June reached 58,600 kilograms.

	PRICES [IN FRANCS PER KILOGRAM].
Sierra Leone:	Bassam lumps..... 5. @5.65
Niggers, red I.....	9 30 @9.45
Niggers, white I.....	9.10 @2.90
Niggers, white II.....	Flakes..... 2. @3.
III.....	5.10 @7.20
Twists.....	8.75 @8.75
Cassamance A.P. A.....	7.40 @7.80
Cassamance A.M. B. ....	5 @6.85
Java.....	7.75 @8.

	RUBBER IMPORTS AT BORDEAUX—FOUR YEARS.
GRADES.	1899 1900 1901 1902.
Soudan twists.....	96,517 94,450 144,200 310,000
Soudan niggers.....	30,242 26,150 33,060 130,000
Conakry niggers.....	— 4,250 2,000 50,000
Gambia.....	41,790 71,667 15,920 135,000
Other sorts.....	7,040 43,015 39,300 53,000
Total.....	175,589 239,532 235,380 678,400

	ARRIVALS FIRST SIX MONTHS OF THIS YEAR.
Soudan or Conakry kilos.....	356,200 Mexican..... 1,500
Cassamance (Gambia)....	77,000 Sundries..... 600
Congo sorts.....	18,000
Bassam (Gold Coast)....	25,500 Total kilos..... 478,800

Arrivals for the second half of the year are estimated at 214,800 kilos (of which 187,700 kilos Soudan), which would bring the total for the year to 666,500 kilograms [=1,466,300 pounds].

*Antwerp.*

TO THE EDITOR OF THE INDIA RUBBER WORLD: During June two rubber sales occurred, the first on the 19th, when 28 tons were disposed of, and the regular monthly inscription on the 26th, when 322 tons were sold, out of a total of 330 tons offered. Prices showed no change from the preceding month, on the average. The next monthly sale will be held on July 31, when 465 tons will be offered. The statistical tables up to July 1 show practically no change as compared with last year,

namely, imports of 2613 tons since January 1 against 2645 for the same period in 1902. Of this amount 2325 tons were of Congo sorts against 2456 tons of Congos in the first half of last year, showing a shortage in imports of Congo sorts of 931 tons for the first six months of the year. The imports of Congo rubber for the first six months of each year for some time past have been as follows:

	Total. Congos.	Total. Congos.	
1894..... tons 72	72	1899..... tons 1,848	1,605
1895..... 235	235	1900..... 3,011	2,489
1896..... 324	324	1901..... 3,081	2,785
1897..... 749	686	1902..... 2,645	2,456
1898..... 866	745	1903..... 2,613	2,325

C. SCHMID & CO.

Antwerp, July 13, 1903.

On July 31 the offerings included 465 tons. Details regarding the principal lots, supplied by Messrs. Karcher & Co., are as follows—the sale occurring too late in the month to permit the result of the sale to be reported here:

	Brokers' estimation.
44,192 kilos Upper Congo Lopori I.....	francs 9.15
10,274 " Upper Congo Lopori I .....	9.20
17,467 " Upper Congo Lopori II.....	7.75
10,594 " Upper Congo Lake Leopold I.....	8.90
43,539 " Upper Congo Lake Leopold II.....	7.50
23,220 " Upper Congo Aruwimi.....	8.50
51,091 " Upper Congo ordinary.....	9.25
8,820 " Upper Congo Mongalla.....	8.75
15,483 " Upper Congo Yengu.....	9.30
13,182 " Upper Congo Aruwimi.....	8.75
15,908 " Congo Kasai black.....	9.25
12,204 " Congo Kasai red.....	9.05
2,848 " Upper Congo Lomami.....	9.30
13,146 " Congo balls.....	8.25
7,299 " Upper Congo Equateur I.....	9.20
7,294 " Upper Congo Equateur II.....	9.
3,000 " French Congo.....	7. (@ 8.25
2,342 " Pará fine.....	10.75
709 " Mangabeira (Matto Grosso).....	7.50

#### ANTWERP RUBBER STATISTICS FOR JUNE.

DETAILS.	1903.	1902.	1901.	1900.	1899.
Stocks, May... kilos	342,592	464,675	825,442	877,626	503,350
Arrivals in June....	509,222	297,049	537,799	282,176	418,266
Congo sorts.....	436,868	67,926	517,866	243,308	370,822
Other sorts.....	72,354	30,023	19,903	38,868	47,444
Aggregating....	851,814	762,624	1,363,241	1,159,802	921,616
Sales in June.....	363,815	80,954	408,662	433,426	417,619
Stocks, June....	487,999	681,670	954,579	726,376	503,997
Arrivals since Jan. I	2,613,926	2,644,808	3,081,393	3,011,463	1,848,952
Congo sorts .....	2,325,132	2,456,254	2,785,134	2,489,026	1,605,106
Other sorts .....	288,794	188,554	296,258	543,437	243,846
Sales since Jan. I ..	2,784,032	2,377,847	2,740,852	2,577,078	1,608,295

#### RUBBER ARRIVALS AT ANTWERP.

JULY 13.—By the *Anversville*, from the Congo:

Bunge & Co.....(Société Générale Africaine) kilos	283,000
Do .....(Société Anversoise) 13,400	
Do .....(Chemins de fer des Grand Lacs) 9,900	
Do .....(Comité Spécial Katanga) 5,600	
Société Coloniale Anversoise. (Belge du Haut Congo) 1,000	
Do .....(Sud Kamerun) 10,000	
L. & W. Van de Velde. ....(Cle. du Kasai) 70,300	
Charles Dethier. ....(La Haut Sangha) 2,400	
Do .....(Société Belgika) 1,400	
G. & C. Kreglinger. (Cle. des Caoutchoucs & Produits de La Lobay) 3,600	
W. Mallinckrodt & Co.....(Alimaienne) 6,900	407,500

#### PARA RUBBER VIA EUROPE.

JUNE 29.—By the *Umbria*=Liverpool:

Poel & Arnold (Caucho).....

JUNE 30.—By the *Alliance*=Mollendo:

Chicago Bolivian Rubber Co. (Fine).....

POUNDS.

6,800

7,000

JULY 6.—By the *Lucania*=Liverpool:

Poel & Arnold (Fine) .....

JULY 10.—By the *Germanic*=Liverpool:

Poel & Arnold (Fine).....

A. T. Morse & Co. (Fine) .....

JULY 18.—By the *Etruria*=Liverpool:

George A. Alden & Co. (Fine)..... 71,000

William Wright & Co. (Fine)..... 22,000 93,000

JULY 14.—By the *Saratoga*=Mollendo:

Chicago Bolivian Rubber Co. (Fine)..... 7,500

Chicago Bolivian Rubber Co. (Coarse) 1,000 8,500

#### Rotterdam.

THE importation of rubber at this port (mainly from African sources) is carried on by four firms:

Nieuwe Afrikaansche Handel's Venootschap.

Oost-Afrikaansche Compagnie.

Société Commerciale du Soudan Français.

Weise & Co.

The first named company is the oldest trading on the Congo, having established a branch at Boma as early as 1860 and extending their operations up the river with the progress of development in that direction. They were established long before the Belgians entered the field, and notwithstanding the changed conditions, the name of the company and its initials—A H V—continue to be of much influence and very popular with the natives. Arrivals of Congo sorts at Rotterdam take place by the same steamers calling at Antwerp. They are, by the way, not confined to the product of the Congo Free State proper. The figures following indicate (in kilograms) the imports of Congo sorts and also the total imports at Rotterdam for several years past:

	Congo.	Total.	Congo.	Total.
1897.....	467,800	705,650	1900.....	877,450
1898.....	383,200	656,400	1901.....	758,300
1899.....	580,950	804,750	1902.....	899,750

#### Gutta-Percha.

WEISE & CO. (Rotterdam) report exports from Singapore for the first five months of five years past, as follows:

	1899.	1900.	1901.	1902.	1903.
Tons.....	2645	2114	3038	2821	2645

#### IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

JULY 3.—By the steamer *Benedict*, from Manáos and Pará :

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
A. T. Morse & Co. ....	79,800	9,400	71,300	44,200=	204,700
New York Commercial Co. ....	93,600	28,900	56,800	17,500=	166,800
Poel & Arnold.....	6,800	5,700	26,100	.....	38,600
William Wright & Co. ....	13,500	1,700	12,000	.....	27,200
United States Rubber Co. ....	.....	.....	.....	12,100	12,100
L. Hagenaers & Co. ....	5,400	800	5,400	.....	11,600
Total .....	199,100	46,500	171,600	73,800=	491,000

JULY 13.—By the steamer *Maranhense*, from Manáos and Pará :

New York Commercial Co. 104,400	41,500	54,500	.....	200,400
A. T. Morse & Co. ....	60,400	15,800	72,700	11,500=
Poel & Arnold.....	18,900	2,900	30,000	13,800=
G. Amsinck & Co. ....	23,900	35,300	23,400	.....
Edmund Reeks & Co. ....	.....	.....	74,200=	47,200
United States Rubber Co. 40,000	2,200	10,700	10,200=	63,100
William Wright & Co. ....	8,700	1,000	29,000	.....
L. Johnson & Co. ....	12,100	3,500	5,300	.....
Thebaud Brothers.....	9,700	.....	.....	9,700
L. Hagenaers & Co. ....	4,600	.....	2,400	.....
Thomsen & Co. ....	1,400	.....	2,600	900=
Total.....	283,100	102,200	230,600	110,600=

JULY 22.—By the steamer *Fluminense*, from Manáos and Pará:

A. T. Morse & Co. ....	12,200	1,700	72,200	19,200=	105,300
United States Rubber Co. 65,300	6,300	22,400	.....	.....	94,000
William Wright & Co. ....	32,900	6,100	30,700	900=	70,600
New York Commercial Co. 26,300	12,400	10,000	2,500=	.....	51,200
Poel & Arnold .....	9,300	700	18,100	.....	28,100
Lionel Hagenaers & Co. 10,600	1,000	4,700	.....	.....	16,300
Edmund Reeks & Co. ....	10,600	1,100	1,800	1,000=	14,500
Hagemeyer & Brunn....	2,800	300	1,200	.....	4,300
Total.....	170,000	29,600	161,100	23,600=	384,300

[NOTE.—The steamer *Basil*, due at New York on August 2, has on board 130

tons of Rubber and 15 tons of Caucho.]

JULY 16.—By the <i>Majestic</i> =Liverpool:	
Poel & Arnold (Coarse).....	11,000
JULY 18.—By the <i>Campania</i> =Liverpool:	
Poel & Arnold (Fine) .....	132,000
George A. Alden & Co. (Fine) .....	45,000
A. T. Morse & Co. (Fine) .....	11,000 191,000
JULY 20.—By <i>La Gascogne</i> =Havre:	
Poel & Arnold (Fine).....	15,000
A. T. Morse & Co. (Caucho) .....	11,200 26,300
JULY 22.—By the <i>Oceanic</i> =Liverpool:	
George A. Alden & Co. (Fine).....	14,000
Poel & Arnold (Fine).....	42,000 56,000

## OTHER ARRIVALS AT NEW YORK

## CENTRALS.

CENTRALS.	
POUNDS.	
JUNE 23.—By the <i>Athena</i> =Savanna:	
John Boyd, Jr., & Co.....	1,500
Koldan & Van Sickie.....	1,000 2,500
JUNE 24.—By the <i>Barbarossa</i> =Bremen:	
Eggers & Heinein.....	3,500
JUNE 29.—By the <i>Comus</i> =New Orleans:	
A. T. Morse & Co.....	4,000
A. N. Rotholz & Son.....	1,200 5,200
JUNE 30.—By the <i>Allianca</i> =Colon:	
G. Amsinck & Co.....	16,300
Hirzel, Feitman & Co.....	13,500
J. A. Pauli & Co.....	5,600
Koldan & Van Sickie.....	3,200
Andreas & Co.....	2,500
Isaac Brandon & Bros.....	2,500
Fidanque Bros. & Co.....	1,600
D. A. De Lima & Co.....	2,000
Dumarest & Co.....	1,700
A. Santos & Co.....	1,800
Lawrence Johnson & Co.....	1,000
Jimenez & Escobar.....	1,200
H. Marquardt & Co.....	800
Graham, Hinkley & Co.....	700
E. B. Strout.....	500
Laninan & Kemp.....	400
American Trading Co.....	600
Eggers & Heinein.....	600
Ascenso & Cassio.....	300
Mecke & Co.....	200
L. N. Chemedlin & Co.....	300
Markt, Struller & Co.....	300 57,700
JULY 2.—By <i>El Dia</i> =New Orleans:	
A. T. Morse & Co.....	5,500
JULY 6.—By the <i>Tifon</i> =Bahia:	
J. H. Roasbach & Bros.....	40,000
Booth & Co .....	15,000 55,000
JULY 6.—By the <i>Esperanza</i> =Mexico:	
E. Steiger & Co.....	1,500
H. Marquardt & Co.....	1,000
For Hamburg.....	5,500 8,000
JULY 8.—By the <i>Seguradora</i> =Colon:	
Hirzel, Feitman & Co.....	6,200
J. H. Recknagel & Co.....	3,000
Piza, Nephews Co.....	1,600
Silas Elias.....	700
J. H. Rossbach & Bros.....	300
For Antwerp.....	600 12,600
JULY 9.—By <i>El Monte</i> =New Orleans:	
A. T. Morse & Co.....	5,000
Manhattan Rubber Mfg. Co.....	2,000
A. N. Rotholz & Son.....	1,500
T. N. Morgan.....	1,000 9,500
JULY 13.—By the <i>Vigilancia</i> =Mexico:	
Harburger & Stack.....	3,500
F. Probst & Co.....	1,200
Thebaud Bros.....	500
Graham, Hinkley & Co.....	1,000
American Trading Co.....	700
H. Marquardt & Co.....	2,500
E. N. Tibbals & Co.....	500
E. Steiger & Co.....	200
Samuels & Cummings.....	300
For Hamburg.....	1,500 11,900
JULY 13.—By the <i>Etruria</i> =Liverpool:	
George A. Alden & Co.....	10,000
United States Rubber Co.....	9,000 19,000
JULY 13.—By the <i>Alleghany</i> =Savanna, etc.:	
D. A. De Lima & Co.....	1,500
Kunhardt & Co.....	1,300
Lawrence Johnson & Co.....	1,700
A. D. Straus & Co.....	300
Middleton & Co.....	100
G. Amsinck & Co.....	4,800
For Europe.....	700 10,100
JULY 14.—By the <i>Saratoga</i> =Colon:	
Eggers & Heinein.....	2,500
Kunhardt & Co.....	2,800
A. M. Capen Sons.....	2,100

## CENTRALS—Continued.

Lawrence Johnson & Co .....	2,000
Isaac Brandon & Bros.....	2,100
J. Ferro.....	1,500
Roldan & Van Sickie.....	1,300
Meyer Hecht .....	1,100
Jimenez & Escobar.....	1,100
American Trading Co.....	1,000
Ascenso & Cassio.....	600
A. Santos & Co.....	600 18,700

JULY 21.—By the *Yucatan*=Colon:

G. Amsinck & Co.....	12,100
Hirzel, Feitman & Co.....	4,300
American Trading Co.....	3,400
H. Marquardt & Co.....	2,600
Boeh, Andrews & Co.....	2,000
Livingstone & Co.....	1,500
E. B. Strout .....	1,700
Everett, Hinkley & Co.....	1,100
Fidanque Bros. & Co.....	700
Smithers, Nordenholz & Co.....	600
Andreas & Co.....	300
Meyer Hecht .....	300
For Antwerp.....	1,500 32,000

JULY 20.—By the *Proteus*=New Orleans:

Manhattan Rubber Mfg. Co.....	3,000
A. T. Morse & Co.....	2,100 8,000

## AFRICANS.

AFRICANS.	
POUNDS.	
JUNE 24.—By the <i>Oceanic</i> =Liverpool:	
Rubber Trading Co.....	11,500
Joseph Cantor.....	5,000 16,500

JUNE 27.—By the *Belgravia*=Hamburg:

Poel & Arnold.....	24,000
George A. Alden & Co.....	14,000
Rubber Trading Co.....	13,000 51,000

JUNE 29.—By the *Umbria*=Liverpool:

George A. Alden & Co.....	16,000
William Wright & Co.....	6,000
Rubber Trading Co.....	4,000 26,000

JULY 1.—By the *Pennsylvania*=Hamburg:

Rubber Trading Co.....	14,000
Monarch Rubber Co.....	5,500 19,500

JULY 6.—By the *Lucania*=Liverpool:

George A. Alden & Co.....	11,000
H. A. Gould Co.....	5,000
A. T. Morse & Co.....	4,000 20,000

JULY 6.—By the *Patria*=Lisbon:

United States Rubber Co.....	225,066
George A. Alden & Co.....	11,000 236,000

JULY 6.—By the *Zeeland*=Antwerp:

Joseph Cantor.....	8,000
Rubber Trading Co.....	3,000 11,000

JULY 9.—By the *Patricia*=Hamburg:

Rubber Trading Co.....	34,000
George A. Alden & Co.....	4,500 18,500

JULY 10.—By the *Germania*=Liverpool:

Poel & Arnold.....	15,000
Rubber Trading Co.....	10,000
A. T. Morse & Co.....	15,000

JULY 13.—By the *Philadelphia*=London:

Poel & Arnold.....	9,000
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JULY 13.—By the *Etruria*=Liverpool:

William Wright & Co.....	20,000
H. A. Gould Co.....	4,500 24,500

JULY 13.—By the *Finland*=Antwerp:

Poel & Arnold.....	250,000
A. T. Morse & Co.....	45,000
Rubber Trading Co.....	9,000 304,000

JULY 16.—By the *Majestic*=Liverpool:

Poel & Arnold.....	10,000
United States Rubber Co.....	11,000 21,000
A. T. Morse & Co.....	2,500 73,500

JULY 18.—By the *Campania*=Liverpool:

Poel & Arnold.....	45,000
Rubber Trading Co.....	26,000
George A. Alden & Co.....	2,500 73,500

JULY 20.—By the *Bulgaria*=Hamburg:

Rubber Trading Co.....	18,000
A. T. Morse & Co.....	18,000 71,000

JULY 21.—By the *Vaderland*=Antwerp:

George A. Alden & Co.....	250,000
H. A. Gould Co.....	5,500 55,500

JULY 22.—By the *Oceanic*=Liverpool:

Poel & Arnold.....	25,000
George A. Alden & Co.....	11,000
Rubber Trading Co.....	11,000 55,500

## EAST INDIAN.

EAST INDIAN.	
POUNDS.	

JUNE 29.—By the *St. Paul*=London:

Poel & Arnold.....	14,000
H. A. Gould Co.....	1,500 15,500

JUNE 29.—By the *Indramayo*=Singapore:

Robert Brans & Co.....	19,000
William Wright & Co.....	7,000 26,000

JULY 7.—By the *Indrani*=Singapore:

D. P. Cruikshank.....	7,000
JULY 9.—By the <i>Hohenfels</i> =Calcutta:	

Poel & Arnold .....	4,500
Poel & Arnold .....	8,500

## PONTIANAK.

PONTIANAK.	
POUNDS.	

JUNE 29.—By the *St. Paul*=London:

George A. Alden & Co.....	1,000
J. H. Recknagel & Co.....	55,000 245,000

JULY 7.—By the *Indrani*=Singapore:

## JUNE EXPORTS OF INDIA-RUBBER FROM PARA (IN KILOGRAMS).

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Cmok, Schrader & Co. ....	5,950	340	42,060	—	48,350	87,422	7,650	30,740	702	126,514	174,864
Frank da Costa & Co. ....	24,386	1,603	71,380	150	97,518	53,528	4,628	28,754	—	86,910	184,428
Adelbert H. Alden. ....	33,433	9,520	41,340	160	84,453	51,770	8,970	20,260	1,642	82,642	167,095
Kanthack & Co. ....	11,670	3,271	2,653	—	17,594	4,332	338	11,006	241	15,917	33,511
Neale & Staats. ....	90	—	13,390	—	13,480	9,408	840	3,160	2,143	15,551	29,031
Denis Crouan & Co. ....	16,913	2,151	17,450	—	36,114	3,330	168	430	168	4,086	40,600
Pires, Teixeira & Co. ....	8,061	385	6,143	—	14,589	4,948	—	1,282	—	6,230	20,819
Sundry small shippers ....	3,390	174	3,902	484	7,890	9,626	507	5,301	520	15,954	23,844
Direct from Itacatira. ....	—	—	—	—	—	1,870	170	600	858	3,498	3,498
Direct from Iquitos. ....	—	—	—	—	—	13,784	1,408	4,737	57,787	77,716	77,716
Direct from Manáos. ....	204,741	70,002	81,887	138,375	495,005	167,878	35,944	53,376	245,661	502,859	997,864
Total for June. ....	308,634	87,445	280,205	139,109	615,393	407,896	60,623	159,636	309,722	937,877	1,753,270
Total for January-May. ....	3,764,883	950,704	2,445,930	896,969	8,058,486	4,395,622	528,906	1,165,727	1,972,433	8,065,688	16,124,174
Total for July December. ....	2,724,574	649,906	2,172,215	78,623	5,625,318	4,011,602	609,423	1,113,862	500,474	6,235,361	11,860,679
TOTAL, CROP YEAR. ....	6,798,091	1,688,055	4,898,356	1,114,701	14,499,197	8,815,120	1,198,052	2,442,225	2,782,629	15,238,926	29,738,123

## EXPORTS OF INDIA-RUBBER FROM MANAOS—CROP YEAR 1902-03.

BY COURTESY OF WITT &amp; CO. [WEIGHTS IN KILOGRAMS.]

EXPORTERS.	NEW YORK.					LIVERPOOL.					HAVRE AND HAMBURG.					GRAND TOTAL.
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Dusendack & Co. ....	1,177,471	506,820	404,551	321,208	2,409,129	1,496,945	94,655	251,654	600,140	2,443,394	256,730	22,578	34,850	54,801	368,968	5,221,491
Witt & Co. ....	1,214,354	269,520	263,617	378,496	2,115,987	609,001	71,980	130,032	206,702	1,107,716	42,840	4,771	2,832	1,800	51,671	3,275,573
A. H. Alden ....	1,453,059	306,659	342,534	2,250	2,187,502	447,186	88,399	56,840	111,838	703,934	5,440	5,440	5,520	—	16,400	2,907,836
Andresen Suces ....	45,499	21,794	17,646	26,533	111,472	511,492	210,214	119,472	63,981	905,150	73,040	17,555	18,582	1,100	110,077	1,126,708
Neale & Staats ....	218,620	61,192	70,251	63,315	413,378	197,282	44,146	46,325	103,244	390,997	57,670	9,440	5,170	936	73,210	877,585
Reeks & Astlett ....	310,029	50,920	82,717	160,24	621,890	11,456	344	2,490	83,934	98,221	—	—	—	—	—	720,111
B. A. Autun & Co. ....	55,840	8,640	10,440	24,700	99,680	152,000	32,462	28,051	12,423	224,939	—	—	—	—	—	324,619
Brocklehurst & Co. ....	13,686	2,696	2,785	—	19,157	166,414	36,228	33,399	60,435	298,478	1,282	292	187	150	1,831	317,466
Denis Crouan & Co. ....	106,829	20,077	20,138	5,680	182,725	29,366	3,842	3,814	9,867	37,589	9,000	3,470	6,120	5,930	24,920	214,834
Kahn, Pollack & Co. ....	—	—	—	—	—	8,733	1,508	2,366	2,440	15,047	92,261	19,003	27,881	2,396	141,541	156,588
Marius & Levy ....	—	—	—	10,400	10,400	10,640	1,792	2,880	37,700	58,012	11,220	3,606	3,240	45,280	63,346	126,758
Sundry Shippers ....	139,687	44,264	82,198	9,317	216,466	66,590	16,711	17,291	16,712	17,264	141,817	17,686	31,189	102,766	293,458	627,188
Iquitos, Transit ....	—	—	—	—	—	304,070	25,800	124,011	503,842	987,723	207,227	34,126	85,904	344,713	662,270	1,619,933
TOTAL. ....	4,735,074	1,293,651	1,246,878	1,082,183	8,357,786	4,092,144	627,982	818,588	1,812,758	7,340,472	898,431	138,267	230,725	549,866	1,807,392	17,816,550

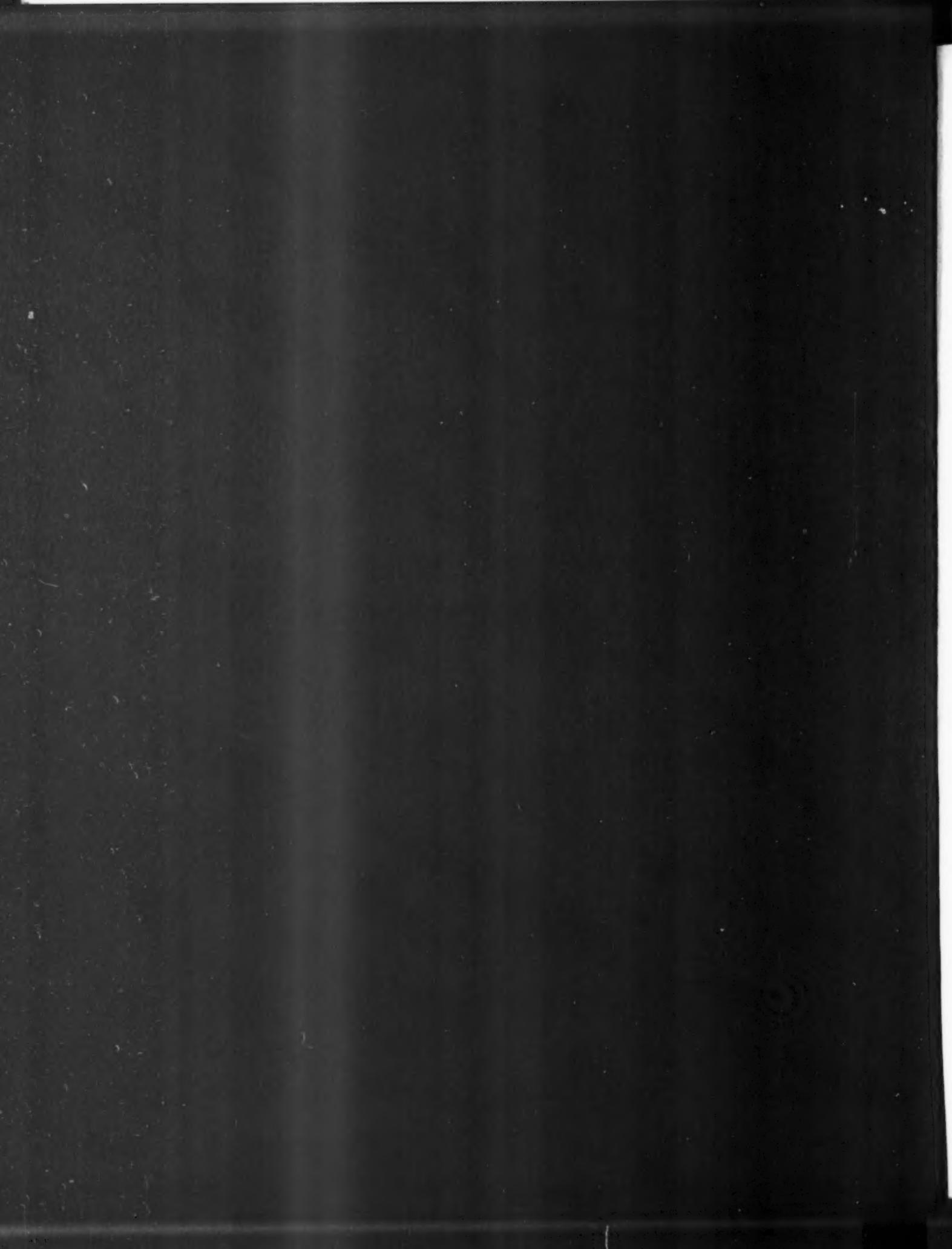
## OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (IN POUNDS).

MONTHS.	UNITED STATES.			GREAT BRITAIN.			
	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
May, 1903. ....	5,143,265	355,912	4,787,353	May, 1903. ....	4,307,632	4,044,768	262,864
January-April. ....	20,072,501	999,095	19,073,406	January-April. ....	20,578,768	13,309,744	7,269,024
Five months, 1903. ....	25,215,766	1,355,007	23,860,759	Five months, 1903. ....	24,886,400	17,354,512	7,531,888
Five months, 1902. ....	12,205,122	1,573,991	22,721,131	Five months, 1902. ....	23,576,224	12,894,860	10,681,388
Five months, 1901. ....	28,805,634	1,327,443	27,478,191	Five months, 1901. ....	22,632,176	12,602,912	10,029,264
GERMANY.							
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
May, 1903. ....	3,289,880	1,016,180	2,273,700	May, 1903. ....	171,940	440	171,500
January-April. ....	12,769,240	5,073,640	7,695,600	January-April. ....	640,080	25,900	614,120
Five months, 1903. ....	16,059,120	6,089,820	9,969,300	Five months, 1903. ....	812,020	26,400	785,620
Five months, 1902. ....	12,087,920	4,702,280	8,285,640	Five months, 1902. ....	661,980	93,500	568,480
Five months, 1901. ....	10,606,860	2,774,200	7,832,660	Five months, 1901. ....	711,920	92,840	629,080
FRANCE.*							
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
May, 1903. ....	1,244,980	1,100,220	144,760	May, 1903. ....	335,060	—	335,060
January-April. ....	5,559,180	2,779,260	2,779,920	January-April. ....	959,640	12,320	947,320
Five months, 1903. ....	6,804,160	3,879,480	2,924,680	Five months, 1903. ....	1,294,700	12,320	1,282,380
Five months, 1902. ....	5,006,900	3,569,720	4,437,180	Five months, 1902. ....	1,199,440	6,820	1,192,620
Five months, 1901. ....	7,292,780	3,103,080	4,090,700	Five months, 1901. ....	1,002,100	7,700	994,400
AUSTRIA-HUNGARY.							
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
May, 1903. ....	—	—	—	May, 1903. ....	335,060	—	335,060
January-April. ....	—	—	—	January-April. ....	959,640	12,320	947,320
Five months, 1903. ....	—	—	—	Five months, 1903. ....	1,294,700	12,320	1,282,380
Five months, 1902. ....	—	—	—	Five months, 1902. ....	1,199,440	6,820	1,192,620
Five months, 1901. ....	—	—	—	Five months, 1901. ....	1,002,100	7,700	994,400

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

\*General Commerce.





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and  
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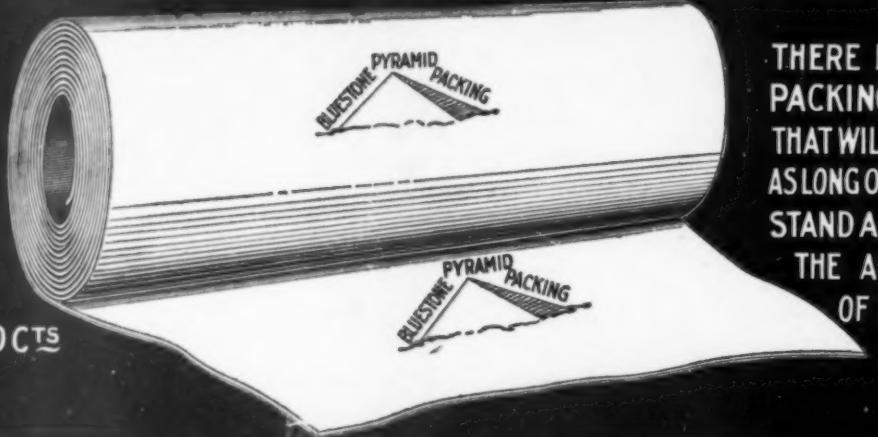
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THAT WILL LAST  
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